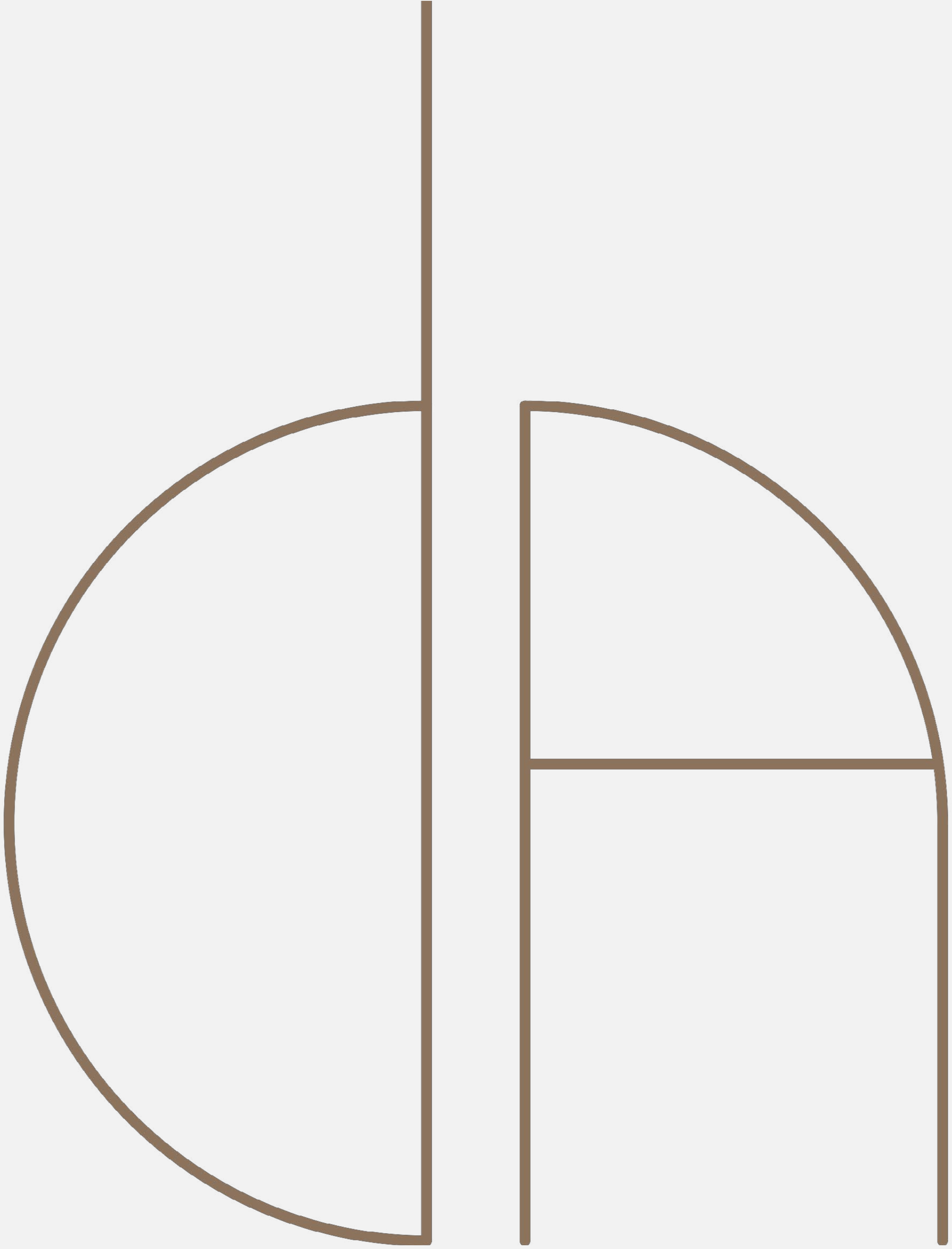

# ARCHITECTURE PORTFOLIO

2019 - 2022

**DAANISH AKRAM**

School of Planning and Architecture, New Delhi

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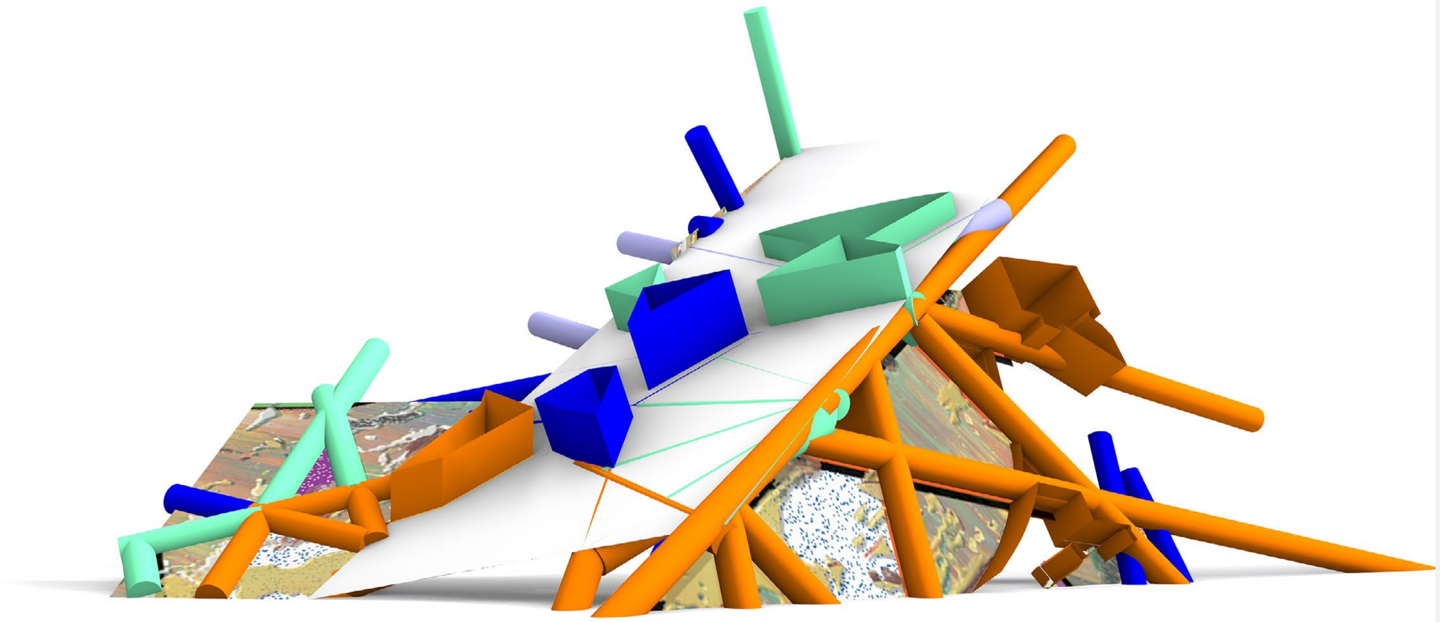
# DAANISH AKRAM

23 | INDIAN
MUSCAT, OMAN

**CONTACT**

+968 9249 9170

daanishakram@gmail.com



Art and Architecture Appreciation
YEAR 3 | SEM 6

## EDUCATION

**Bachelor of Architecture** (2018-2023)
School of Planning and Architecture
New Delhi, India

**High School Diploma** (2006-2018)
Indian School Muscat
Muscat, Oman

## INTERESTS

- Photography
- Reading
- Graphic Design
- History
- Psychology
- Traveling
- Swimming
- Hiking

## LANGUAGES

- **English :** First Language
- **Hindi-Urdu :** Native Language
- **Arabic :** Intermediate

## LINKS

daanish-akram

An Architecture student with a keen interest in civic spaces and cities. I strive to incorporate identity and interaction with the user in my work. I also enjoy reading and gaming, and love to experiment with photography.

## EXPERIENCE

- Solar Decathlon India (2020-2021)
  Participant

## RESEARCH AND DOCUMENTATION

- Research: *Reconsider, Redesign, Retrofit:* Can We Pandemic Proof the Schools? (Ongoing)
- Moradabad Architectural Study (2019)
- Orchha Settlement Study (2019)

## COMPETITIONS

- ***The Dharavi Project* -** archdais (2021)
- ***Little Big Loo : Rethinking Public Toilets* -** VolumeZero (2020)
- ***Hasselblad Masters*** (2021)

## DIGITAL SKILLS

| | | | |
|---|---|---|---|
| AutoCad | ■ ■ ■ ■ ■ ■ | Illustrator | ■ ■ |
| Rhino | ■ ■ ■ ■ ■ | InDesign | ■ ■ ■ ■ ■ |
| Revit | ■ ■ ■ | Lumion | ■ ■ ■ ■ ■ |
| Grasshopper | ■ ■ | V-Ray | ■ ■ ■ |
| SketchUp | ■ ■ ■ ■ | KeyShot | ■ ■ ■ ■ |
| Photoshop | ■ ■ ■ ■ ■ | Enscape | ■ ■ |

**YEAR 4 SEM 7**

## EXPO AND CONVENTION CENTRE

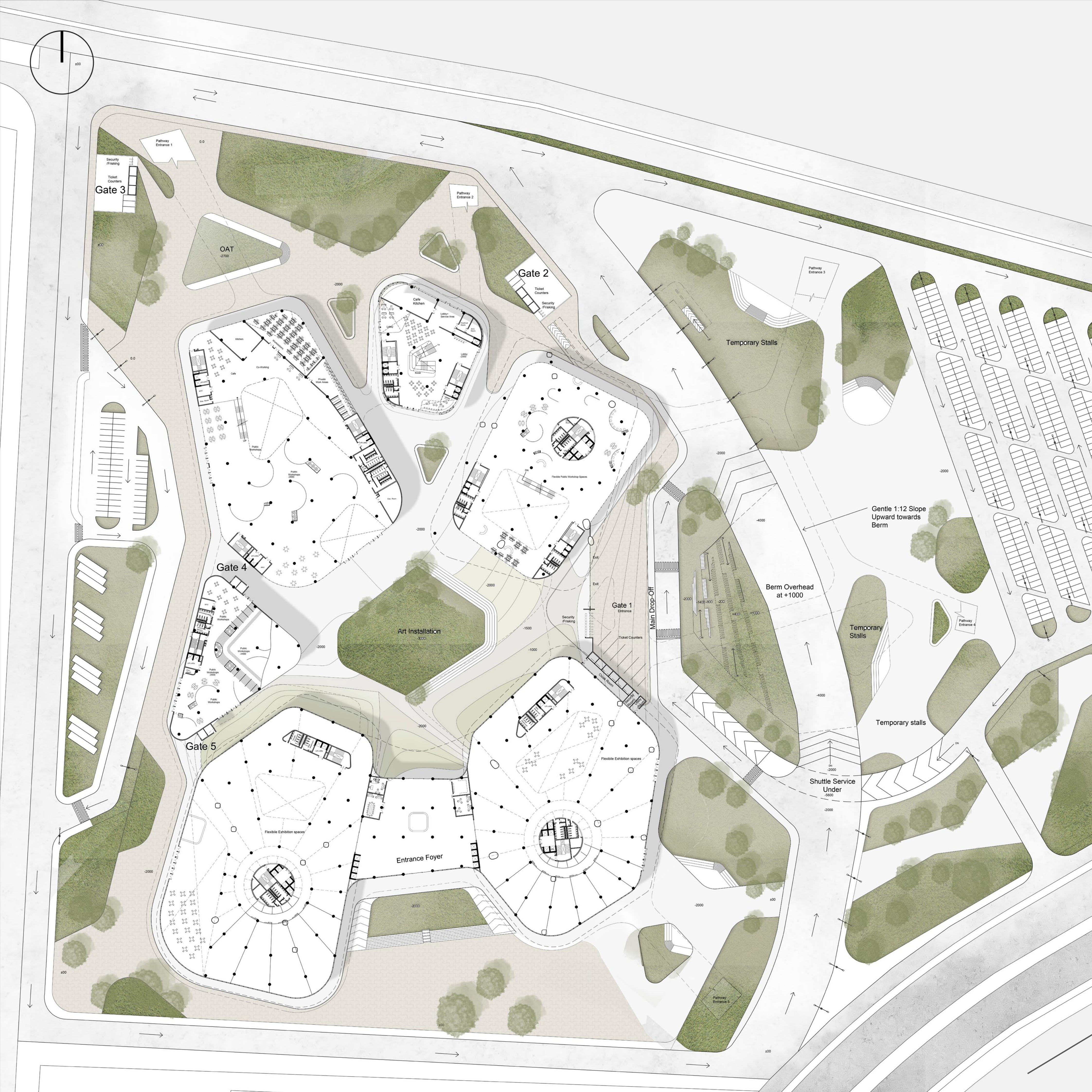
*(Team of 3)*

| | |
|---|---|
| TYPOLOGY | **Exhibition, Auditorium, Galleries, Commercial** |
| LOCATION | **New Delhi, India** |
| SITE AREA | **89500m²** |

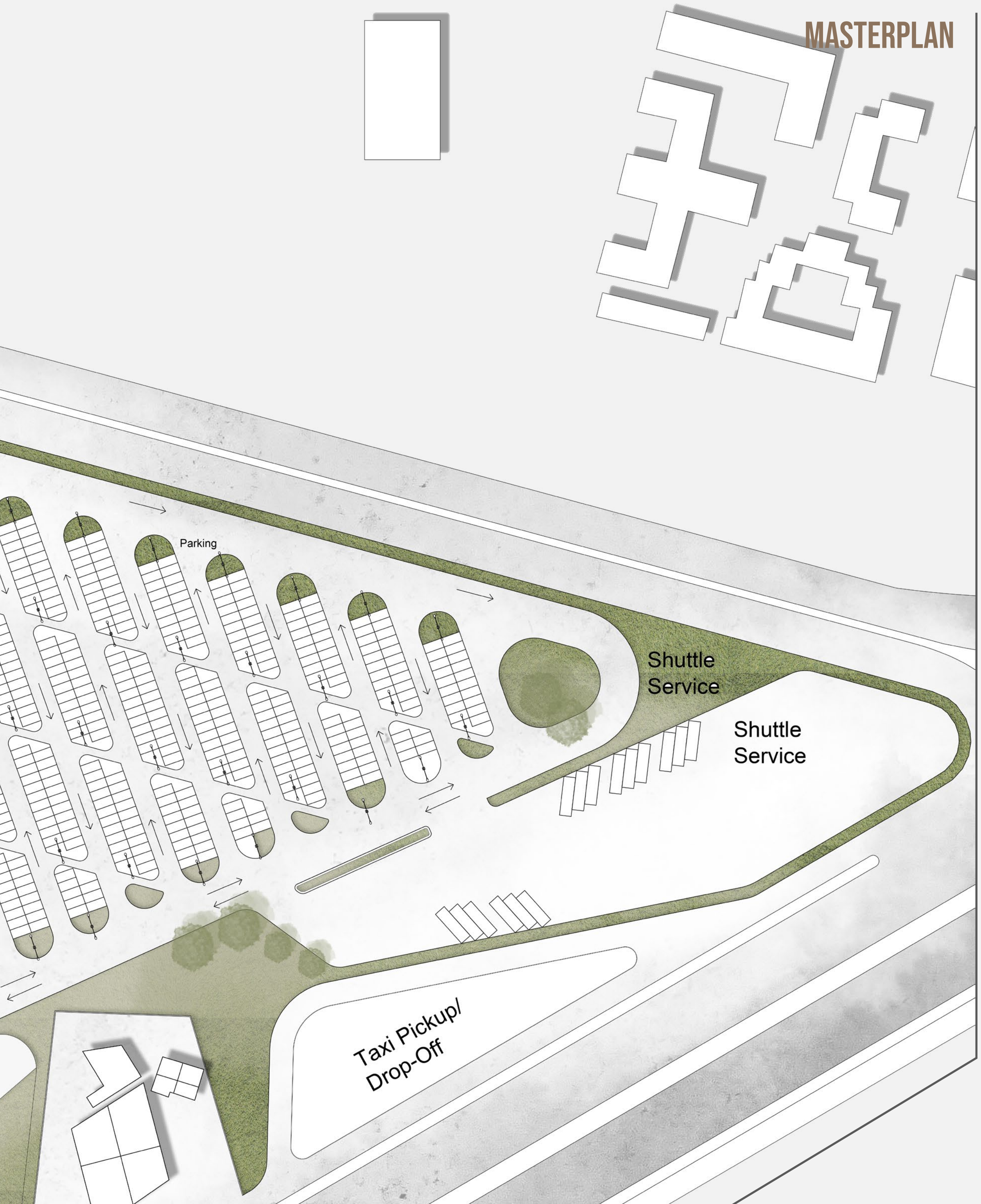
The aim of the Studio is to develop a mixed-use large-span structure for Expos and Convention close to the Indira Gandhi Intl' Airport in New Delhi, India.

The project through its strong edge conditions and prominent urban adjuncts aims to create an urban fabric weaved into the cityscape. It reinterprets the notion of an expo-pavilion by not limiting it to the usual functions such as exhibition spaces, auditoriums, or fairgrounds, but by envisioning a space that would act as a mediator between the socio-economic, cultural, and urban aspects of the region.

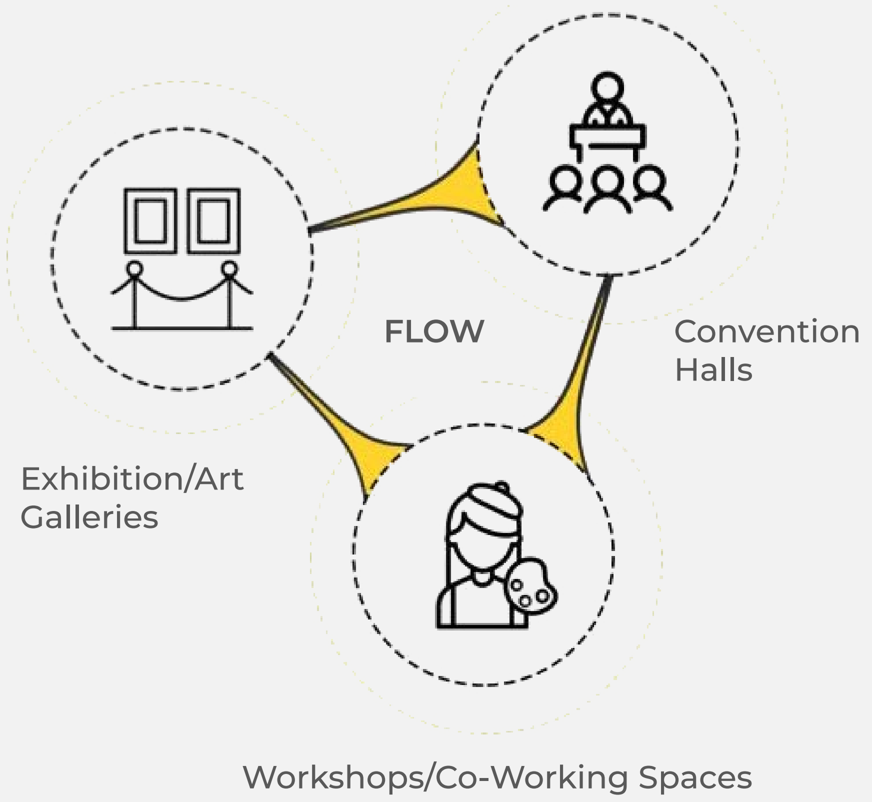
RHINO | GRASSHOPPER | KEYSHOT | LUMION | PHOTOSHOP


±00
Pathway Entrance 1
0.0
Security /Frisking
Ticket Counters
Gate 3
OAT
-2700
Pathway Entrance 2
Gate 2
Ticket Counters
Security /Frisking
-2000
Cafe Kitchen
Lobby+ Service Area
Electrical Room
AHU Room
Lobby
Kiosk
Lobby -2000
Kitchen
Workstations
Co-Working
Cafe
Private Work Areas
Lift Lobby
AHU
Elec. Room
UP
Public Workshops
Public Workshops -2000
Flexible Public Workshop Spaces
DN
Temporary Stalls
Pathway Entrance 3
Gentle 1:12 Slope Upward towards Berm
-4000
Berm Overhead at +1000
-1400
-800
-200
+400
+1000
Temporary Stalls
Pathway Entrance 4
Temporary stalls
Shuttle Service Under
-5600
Gate 4
Public Workshops -4400
Public Workshops
Gate 5
Art Installation
-3000
-1500
-1000
Exit
Gate 1
Entrance
Security /Frisking
Ticket Counters
Main Drop-Off
Cloak Room
Security Room
Utility Room
Flexibile Exhibition spaces
Flexible Exhibition spaces
Entrance Foyer
Pathway Entrance 5

## MASTERPLAN



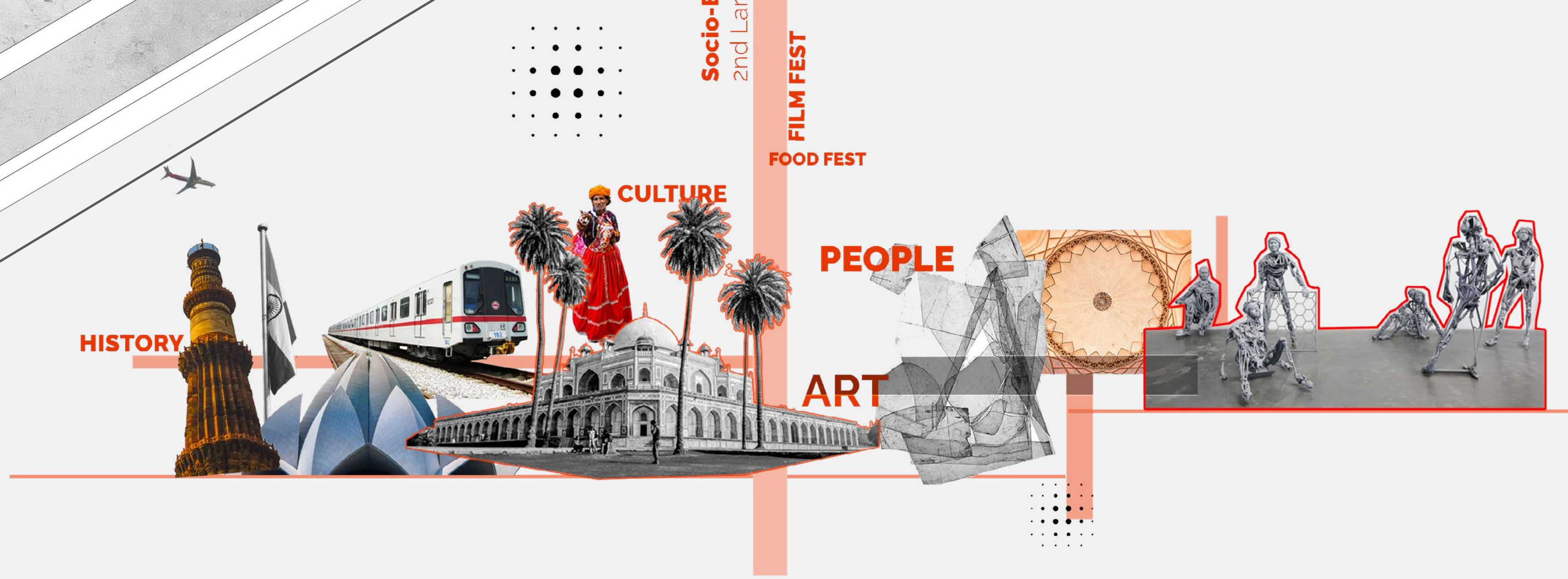
## CONCEPT



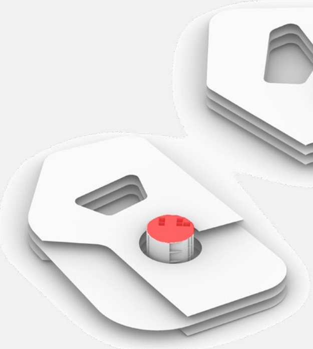
### Continuity and Flow

In order to maximize interaction, the spaces and circulation are conceptualized to be **continuous** attaining a '**flow**'.

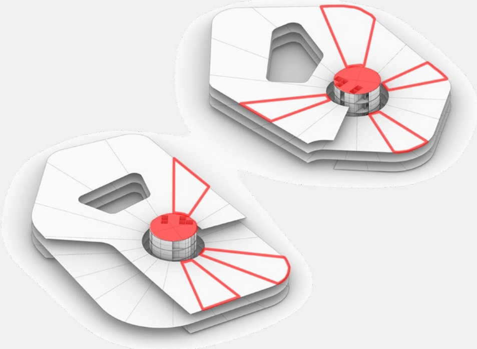
This will enable the users to percieve the building as a **journey with a sequence of spaces** giving them a unique experience.



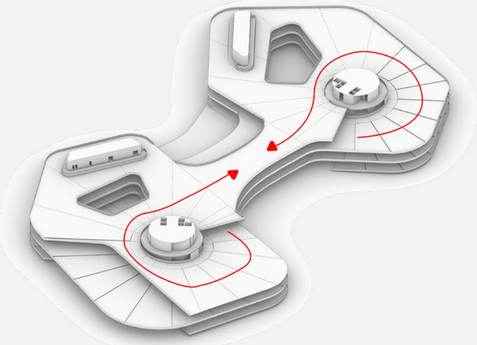
# SURFACE DEVELOPMENT



Accessibility through Rheotomic Surfaces



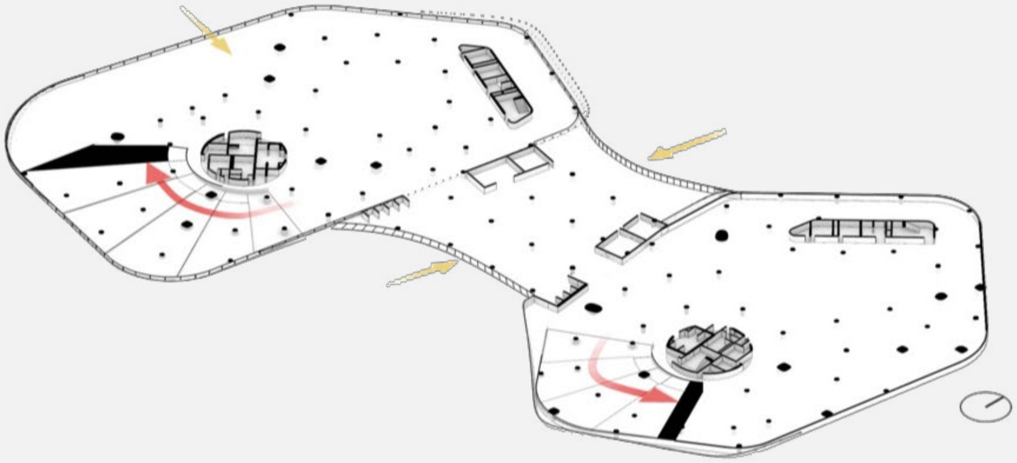
Generating usbale surfaces through flow lines.



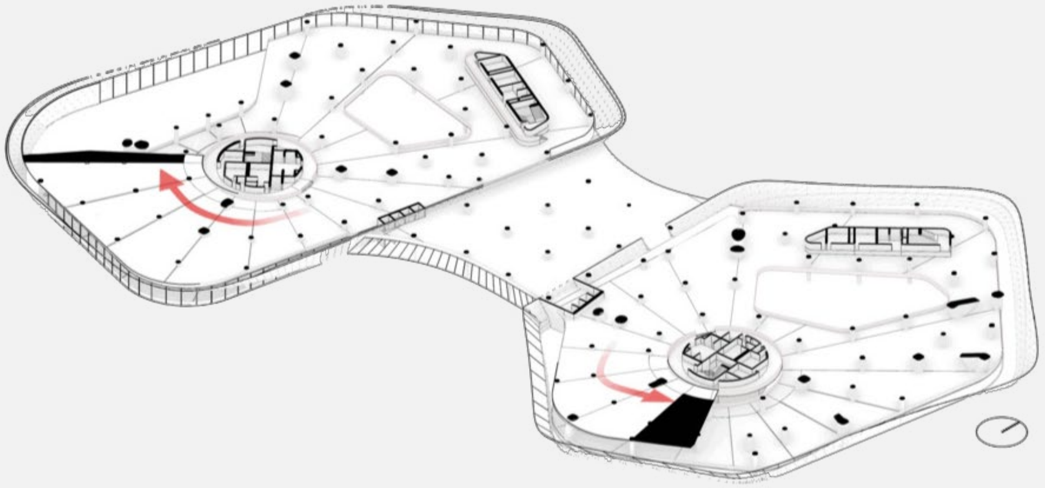
Circulation, flow and conitnuity through connections

---

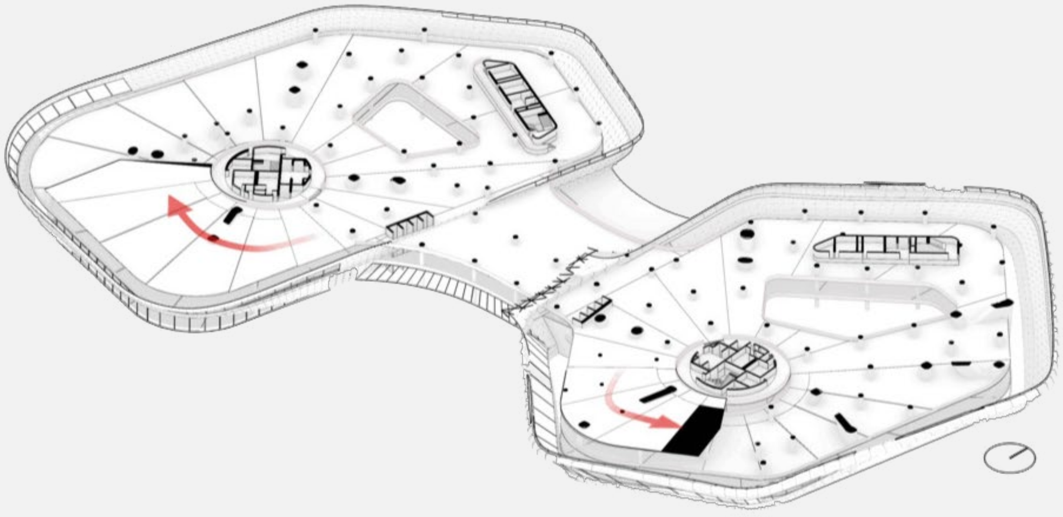
# RHEOTOMIC CIRCULATION - EXHIBITION BLOCK



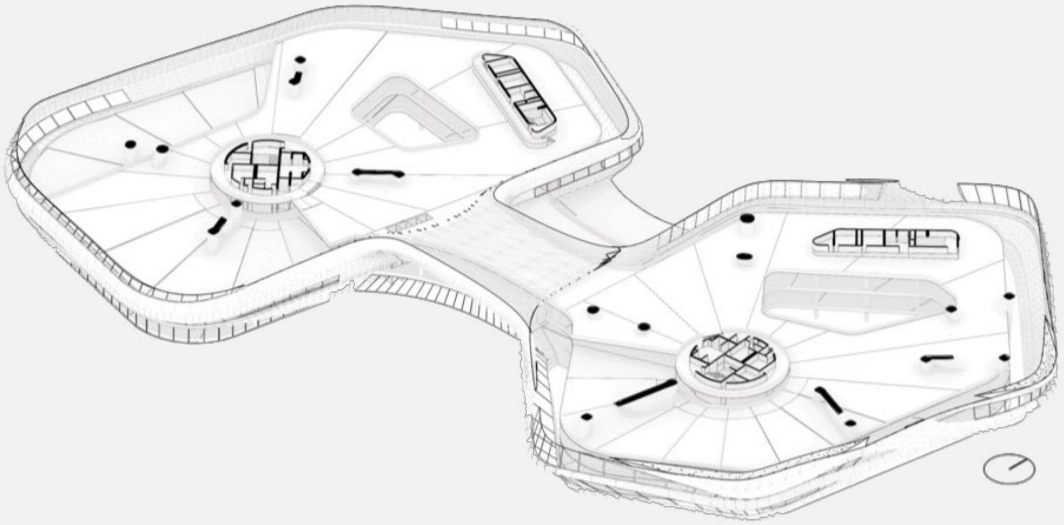
Ground Floor



First Floor

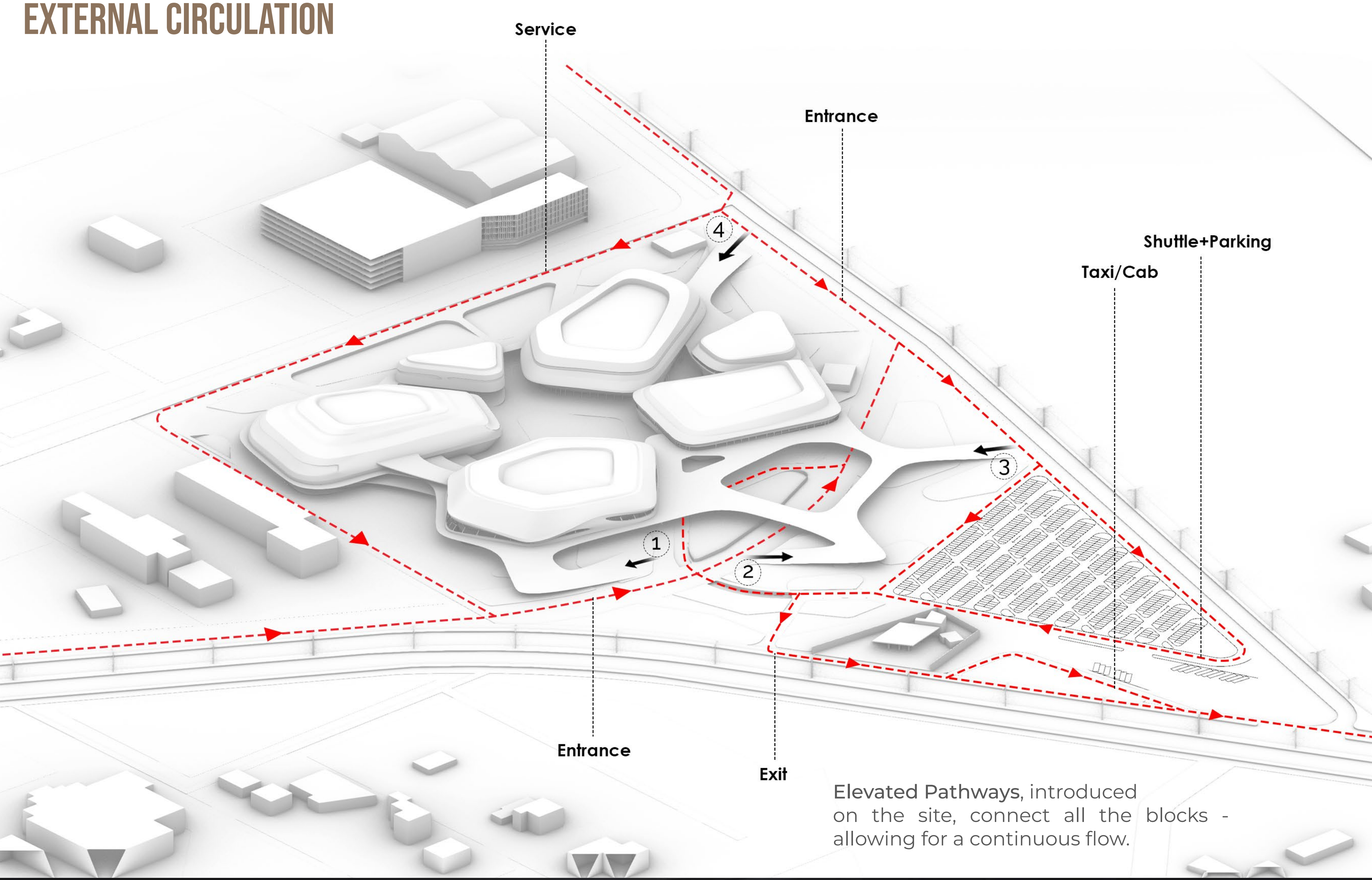


Second Floor

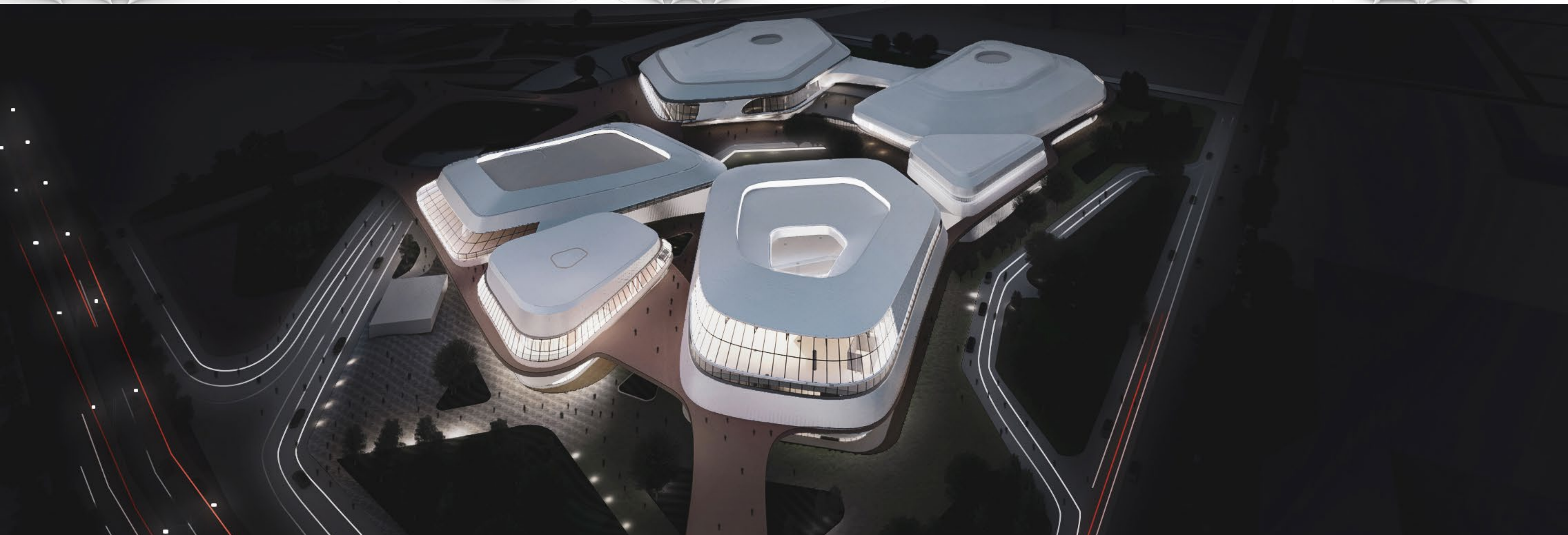


Third Floor

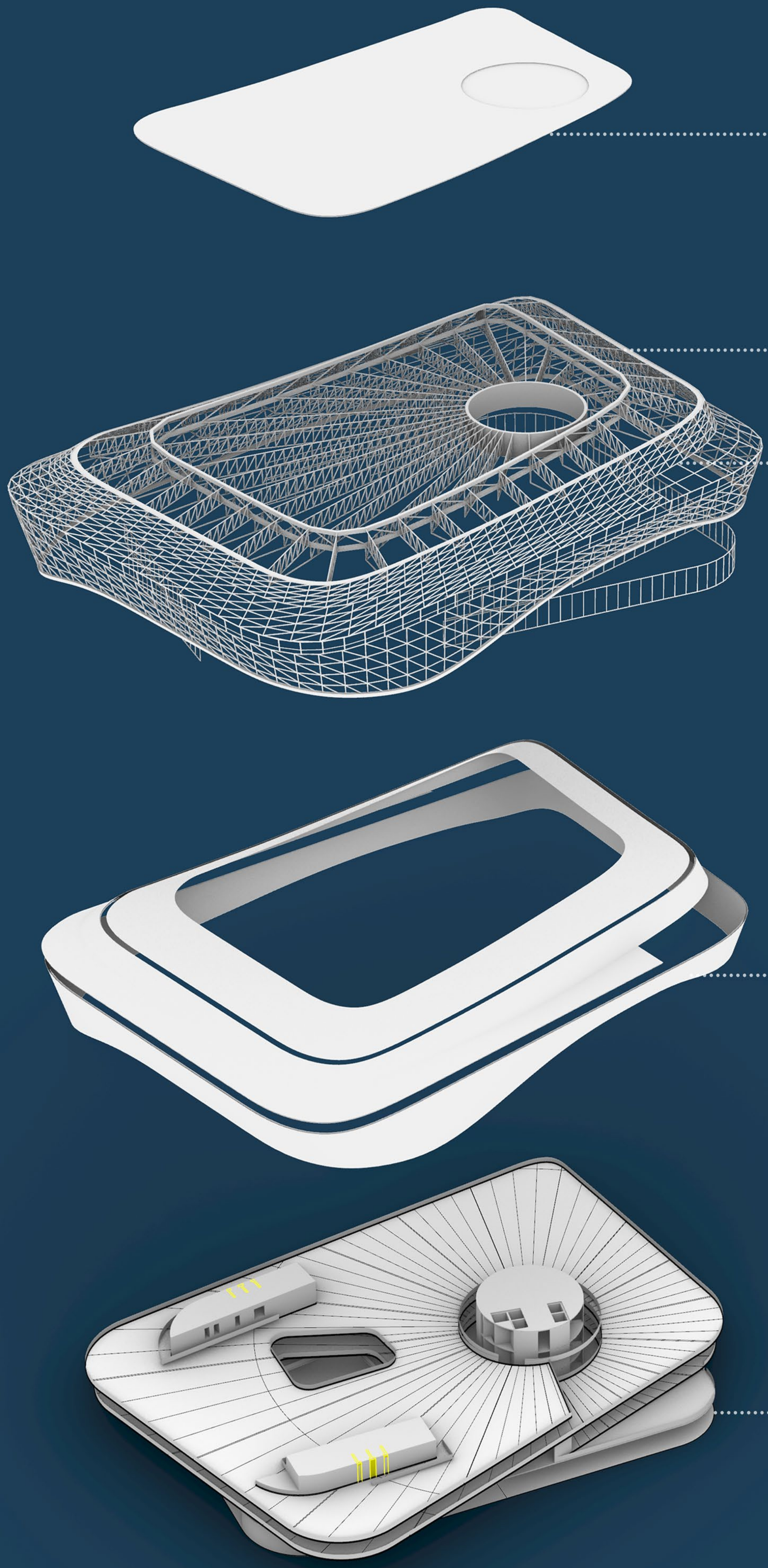
# EXTERNAL CIRCULATION



**Elevated Pathways**, introduced on the site, connect all the blocks - allowing for a continuous flow.



# STRUCTURE - CORE AND SHELL



**Structure**

Steel

**Floor Slabs a**

**Roof**
GFRC Panels

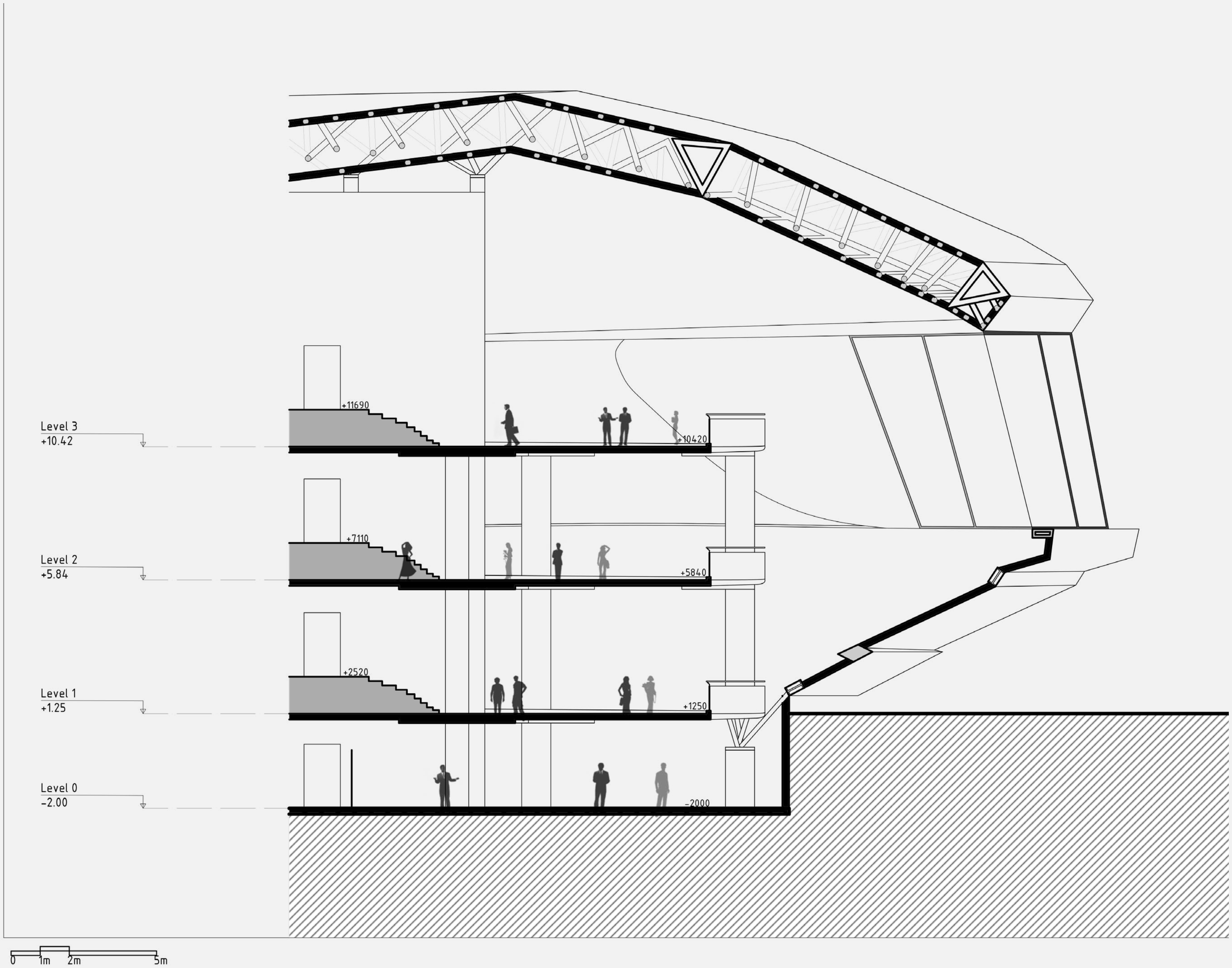
**Truss**
Steel

**for Cladding**
Braced grid structure

**Cladding**
GFRC Panels

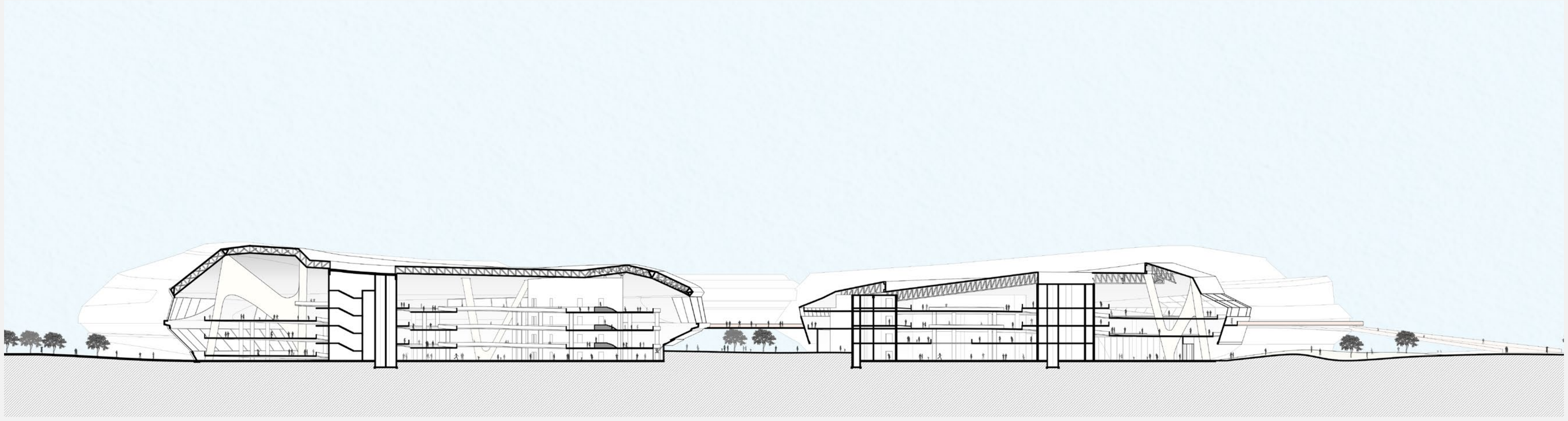
**and Columns**
RCC

# STRUCTURE - RHEOTOMIC SLAB

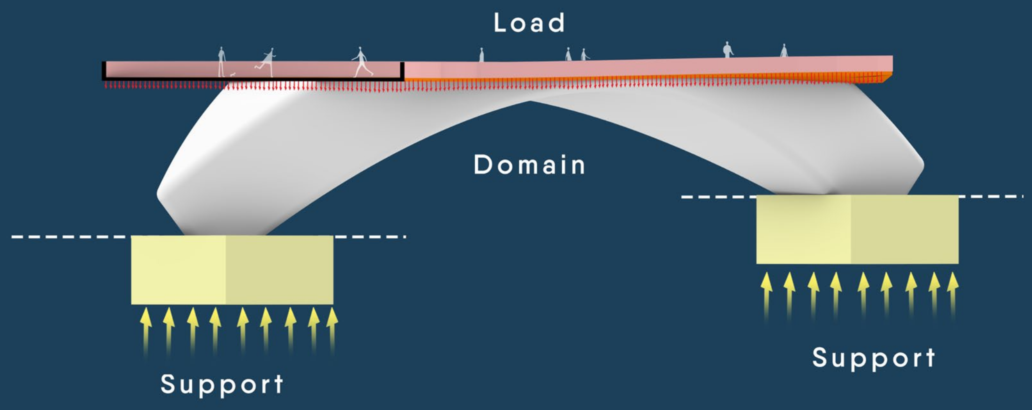


Due to its large scale, the rheotomic surface is almost flat making it walkable for the user at the same time providing a continuous movement. It is a ***Flat Slab Structure*** with column heads placed at regular intervals.

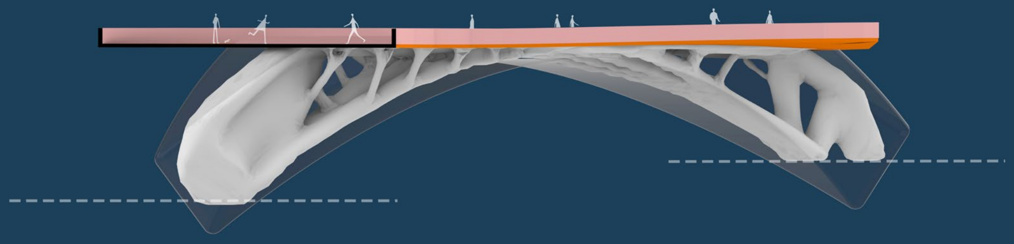
# SITE SECTION



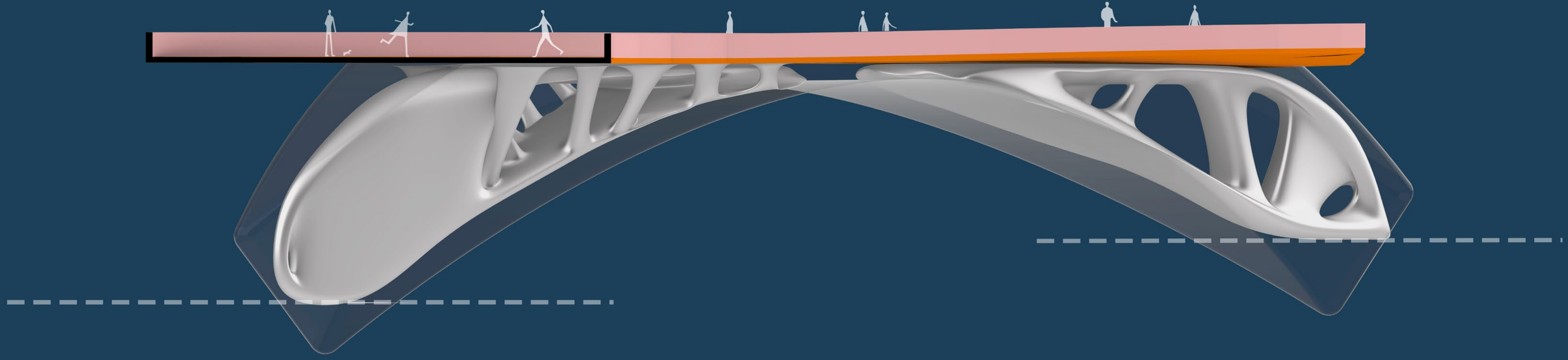
# TOPOLOGICAL OPTIMIZATION - ELEVATED PATHWAY SUPPORT



Initial Massing to support Elevated Pathways

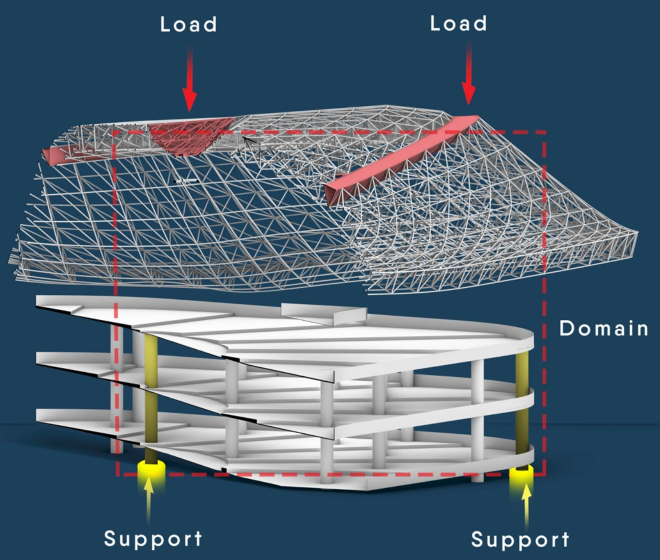


Optimized Mesh Structure

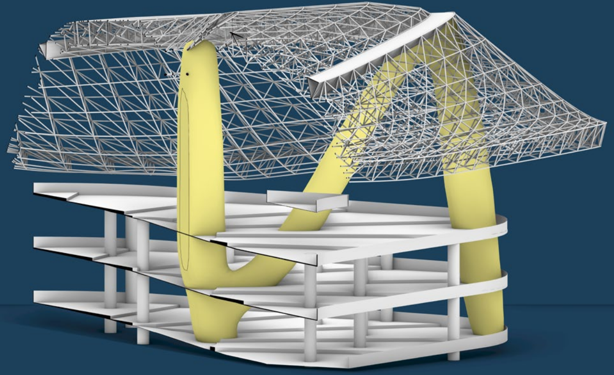


Final Structure smoothened with SubD

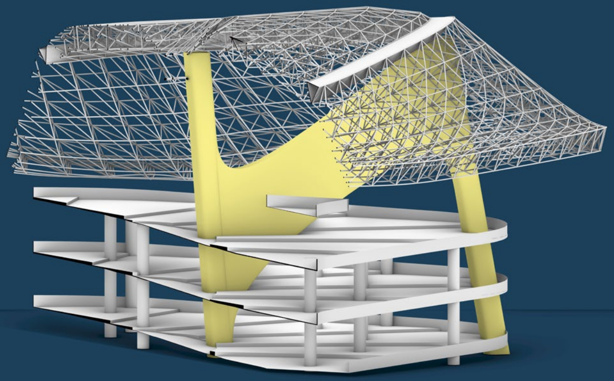
## OPTIMIZED COLUMNS



Initial Loads and Supports



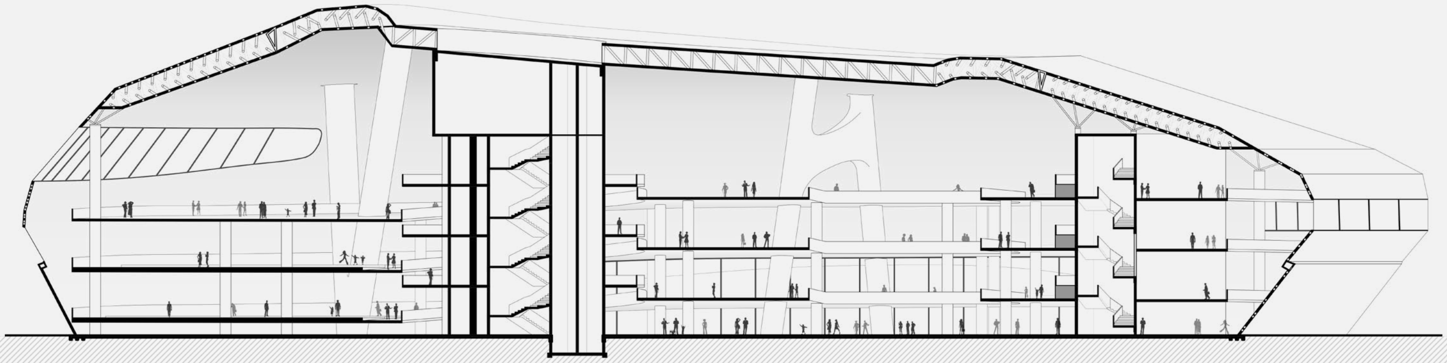
Optimized Mesh Structure

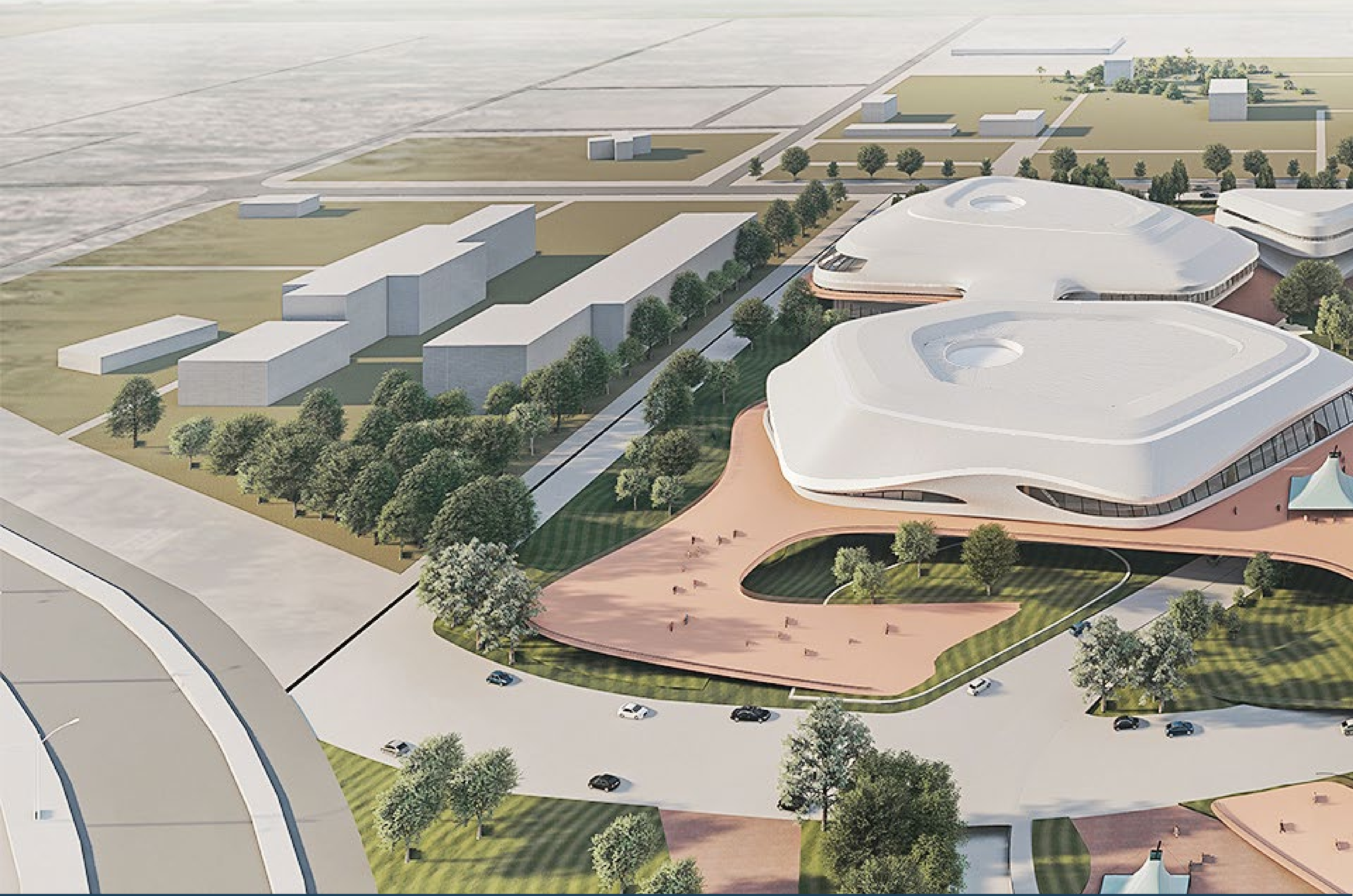


Final Structure

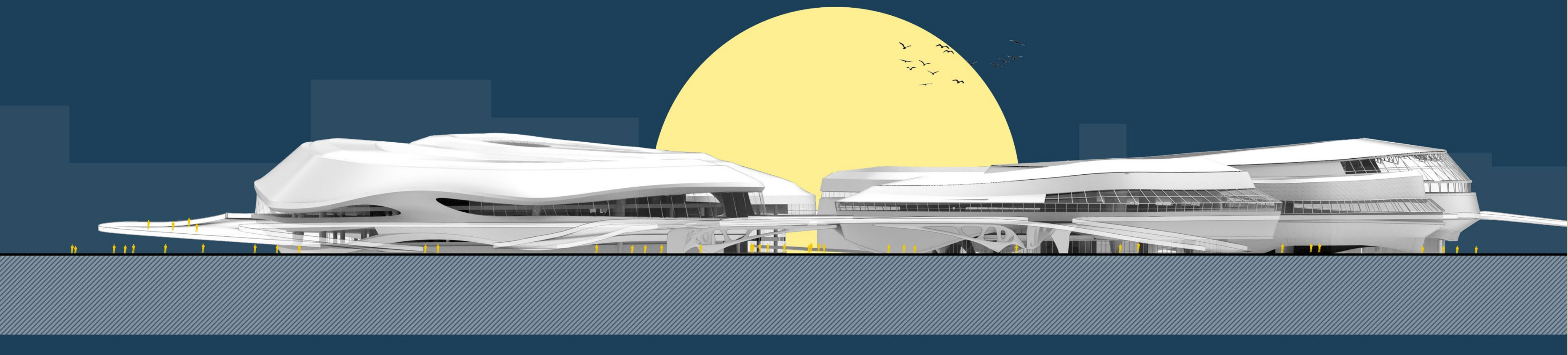
The surface generated for the optimized columns can be utilized to display art and other kinds of digital projections.

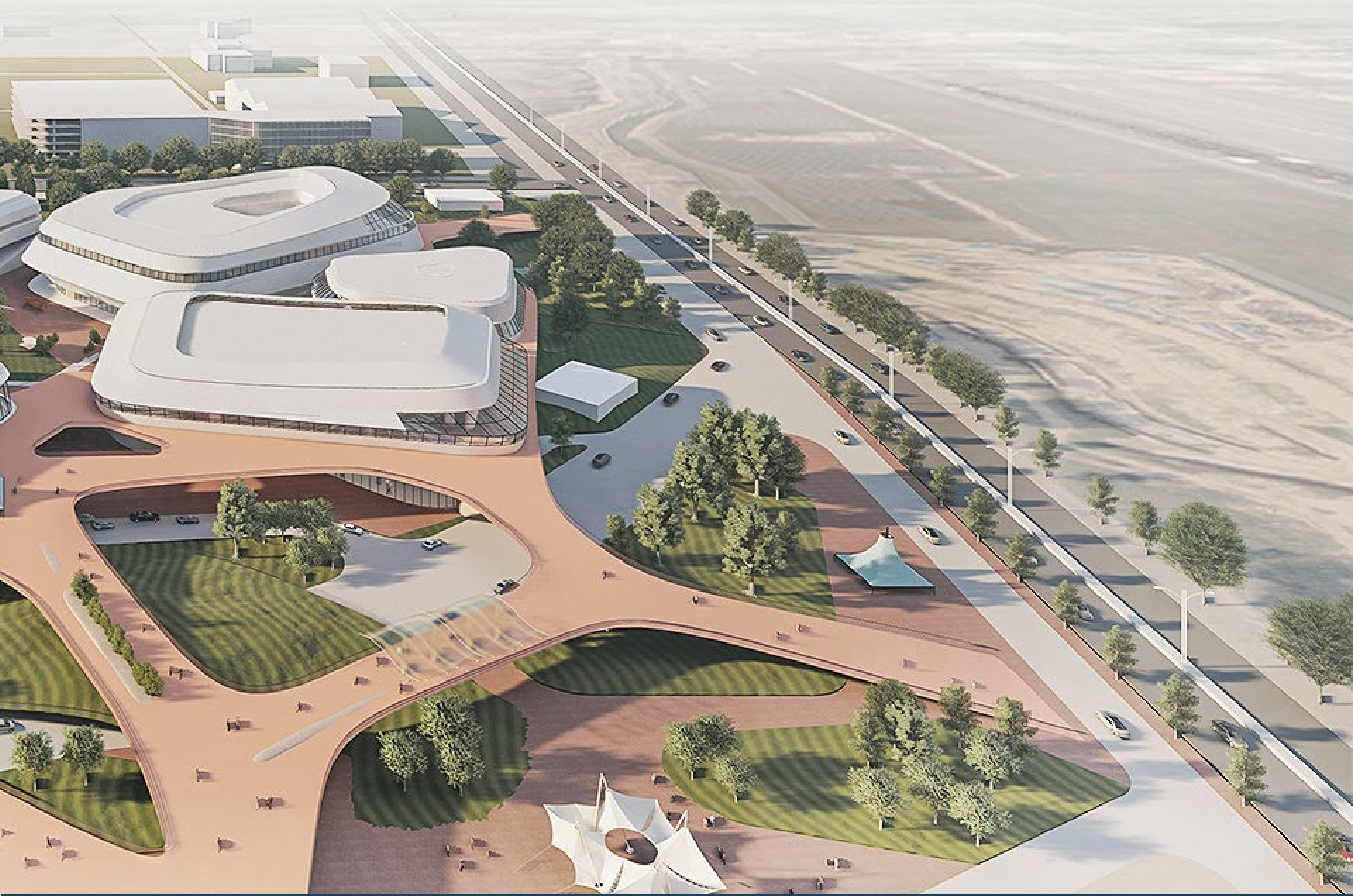
## SECTION - EXHIBITION BLOCK



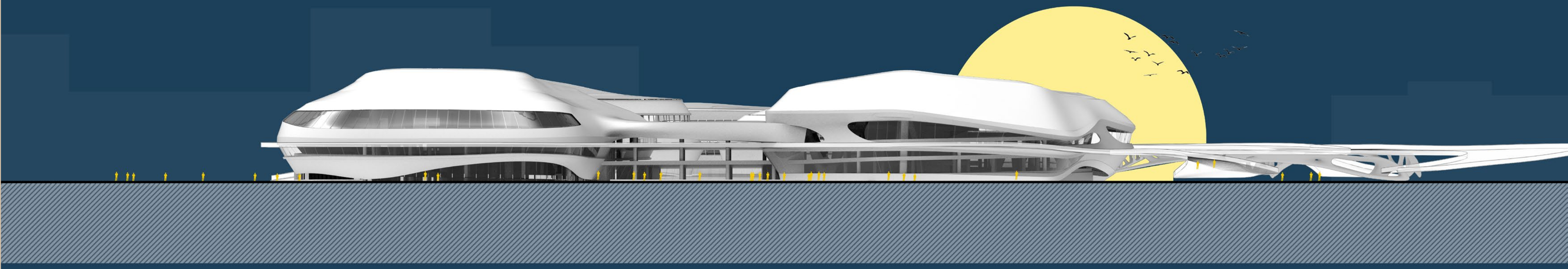


## EAST ELEVATION





## SOUTH ELEVATION



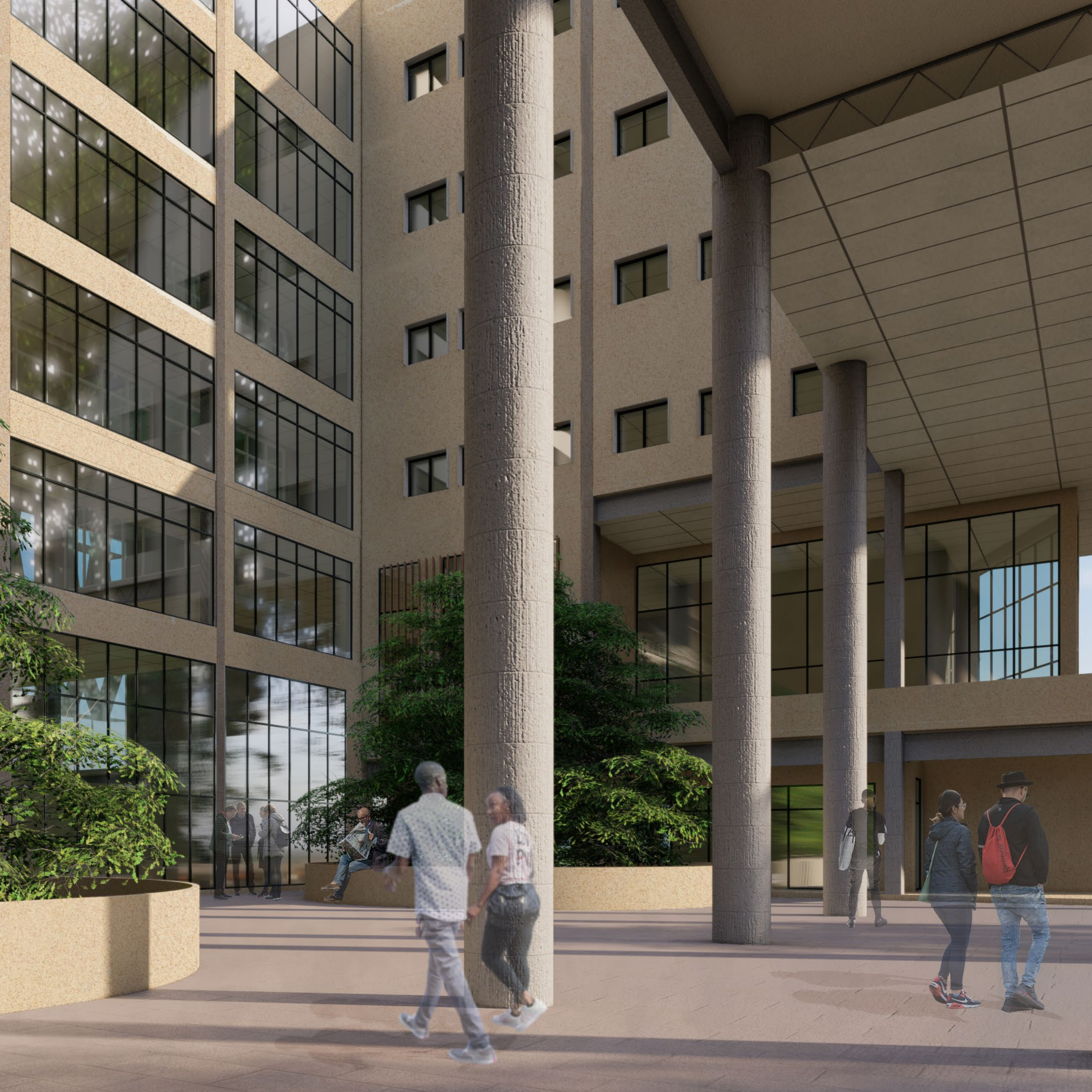
# 02

| YEAR 3 SEM 5-6 | **DESIGN DEVELOPMENT** |
|---|---|
| TYPOLOGY | **Mixed-Use Office** |
| LOCATION | **Amritsar, Punjab, India** |
| SITE AREA | **$6000m^2$** |

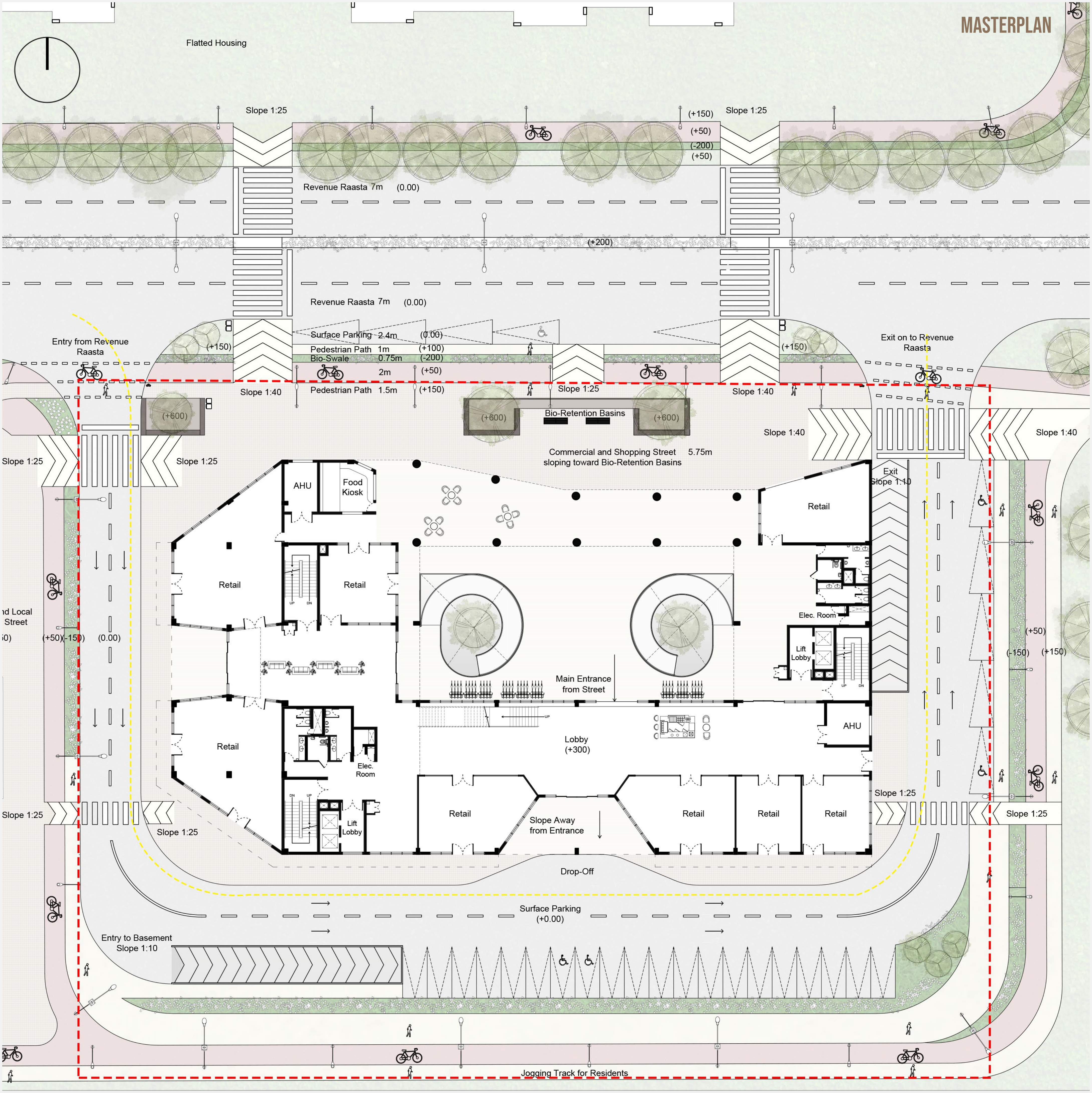
The Studio was based on designing a Mixed-Use Office Building in a township on the outskirts of Amritsar City, India and preparing a detailed, comprehensive report on the Facade Systems, Structure, Services, External Wall Sections of the building as well as all related sections, plans, elevations, details and models.

The Concept of the design is based on the need for establishing a strong degree of interconnection and relation between the more private office spaces and the public spaces on the ground floor; so as to foster an environment where there is an exchange of ideas between different offices and other users of the building. This was done by positioning common public spaces to act as '*transitory spaces*' which connect users of the formal and informal functions

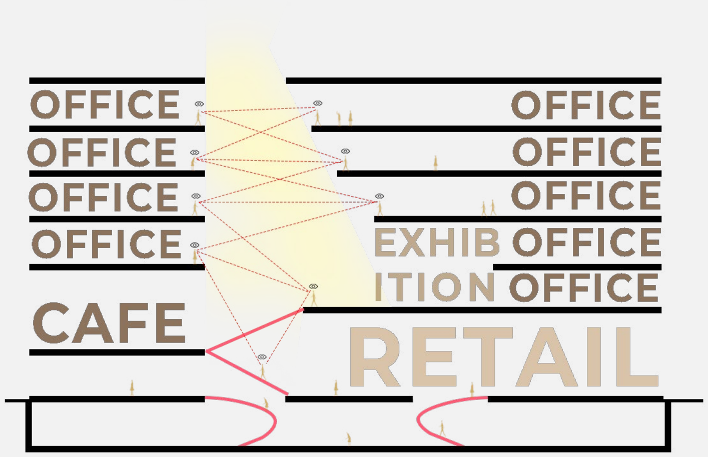
RHINO | AUTOCAD | PHOTOSHOP | LUMION | KEYSHOT



# MASTERPLAN


Flatted Housing
Slope 1:25
(+150)
Slope 1:25
(+50)
(-200)
(+50)
Revenue Raasta 7m (0.00)
(+200)
Revenue Raasta 7m (0.00)
Entry from Revenue Raasta
(+150)
Surface Parking 2.4m (0.00)
Pedestrian Path 1m (+100)
Bio-Swale 0.75m (-200)
2m (+50)
Pedestrian Path 1.5m (+150)
Slope 1:40
Slope 1:25
Slope 1:40
(+150)
Exit on to Revenue Raasta
(+600)
(+600)
Bio-Retention Basins
(+600)
Slope 1:40
Slope 1:40
Slope 1:25
Slope 1:25
Commercial and Shopping Street 5.75m
sloping toward Bio-Retention Basins
Exit
Slope 1:10
AHU
Food Kiosk
Retail
Retail
Retail
UP
DN
nd Local Street
0)
(+50)(-150)
(0.00)
Elec. Room
(+50)
Lift Lobby
(-150)
(+150)
Main Entrance from Street
UP
UP
DN
AHU
Retail
Lobby (+300)
Elec. Room
Slope 1:25
Slope 1:25
DN
UP
Lift Lobby
Retail
Slope Away from Entrance
Retail
Retail
Retail
Slope 1:25
Slope 1:25
Drop-Off
Surface Parking (+0.00)
Entry to Basement Slope 1:10
Jogging Track for Residents

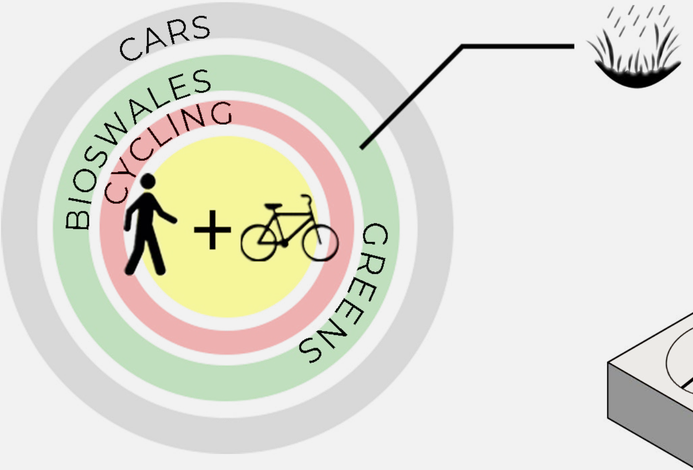
# CONCEPT AND STRATEGIES



Slabs are sheared against each other as a response to the initial concepts of interaction and interconnectedness with the public.

They are sheared in both horizontal and vertical directions to:

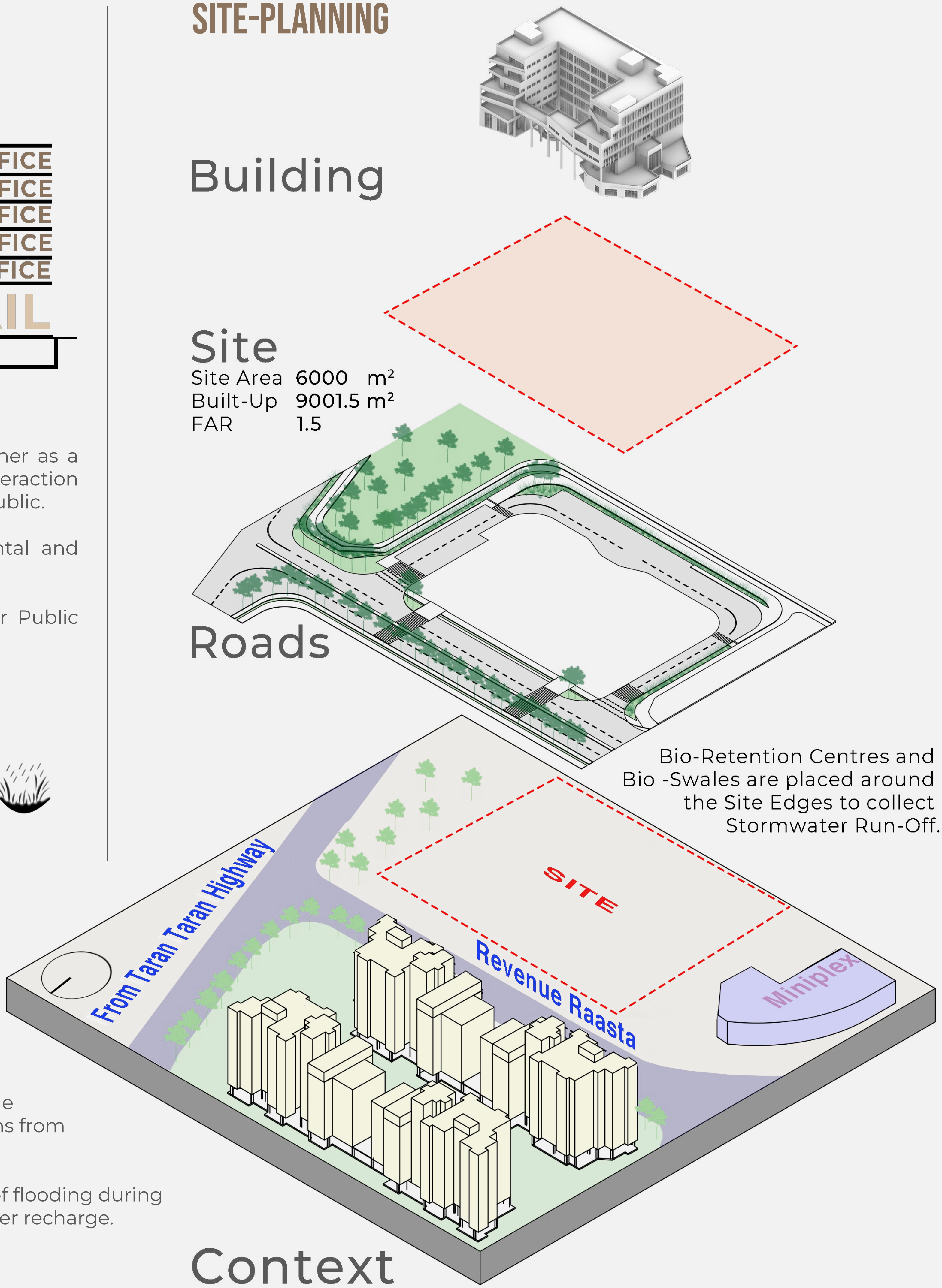
- Form Double Height Spaces for Public functions
- Establish Visual Connect
- Bring in Light



Green Buffer of Bio-Swales shade the walking/cycling paths for pedestrians from traffic, dust and noise.

They also help in reducing the risk of flooding during monsoons and facilitate groundwater recharge.

# SITE-PLANNING



## Building

## Site

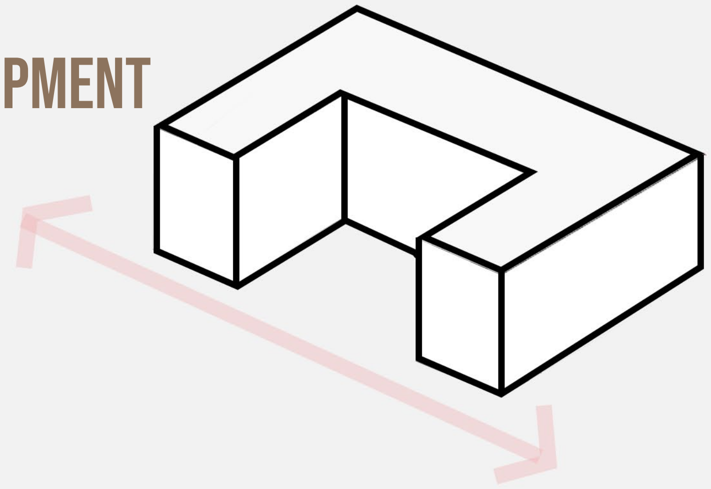
| | |
|---|---|
| Site Area | 6000 $m^2$ |
| Built-Up | 9001.5 $m^2$ |
| FAR | 1.5 |

## Roads

Bio-Retention Centres and Bio -Swales are placed around the Site Edges to collect Stormwater Run-Off.

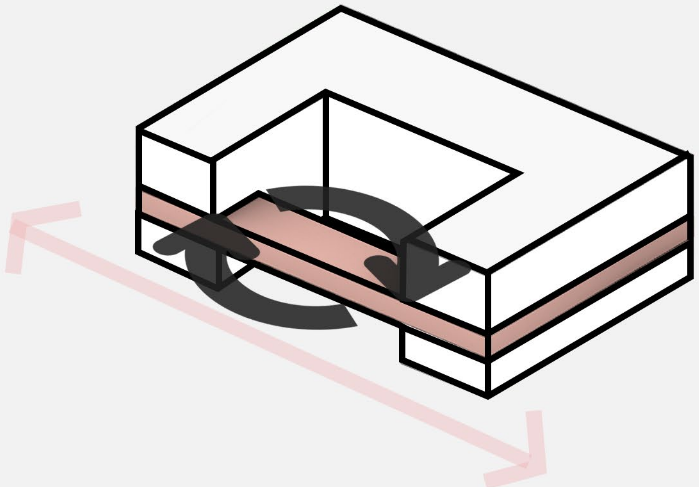
## Context

# FORM DEVELOPMENT



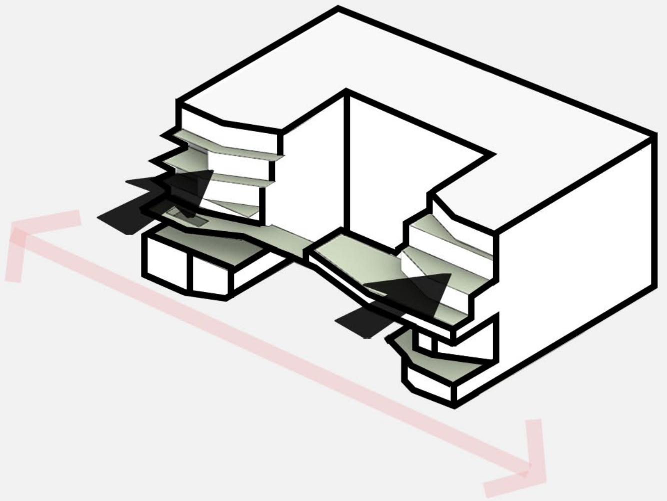
**Courtyard Typology**

A basic courtyard office typology opening up on the street was proposed.



**Creating a 'Threshold'**

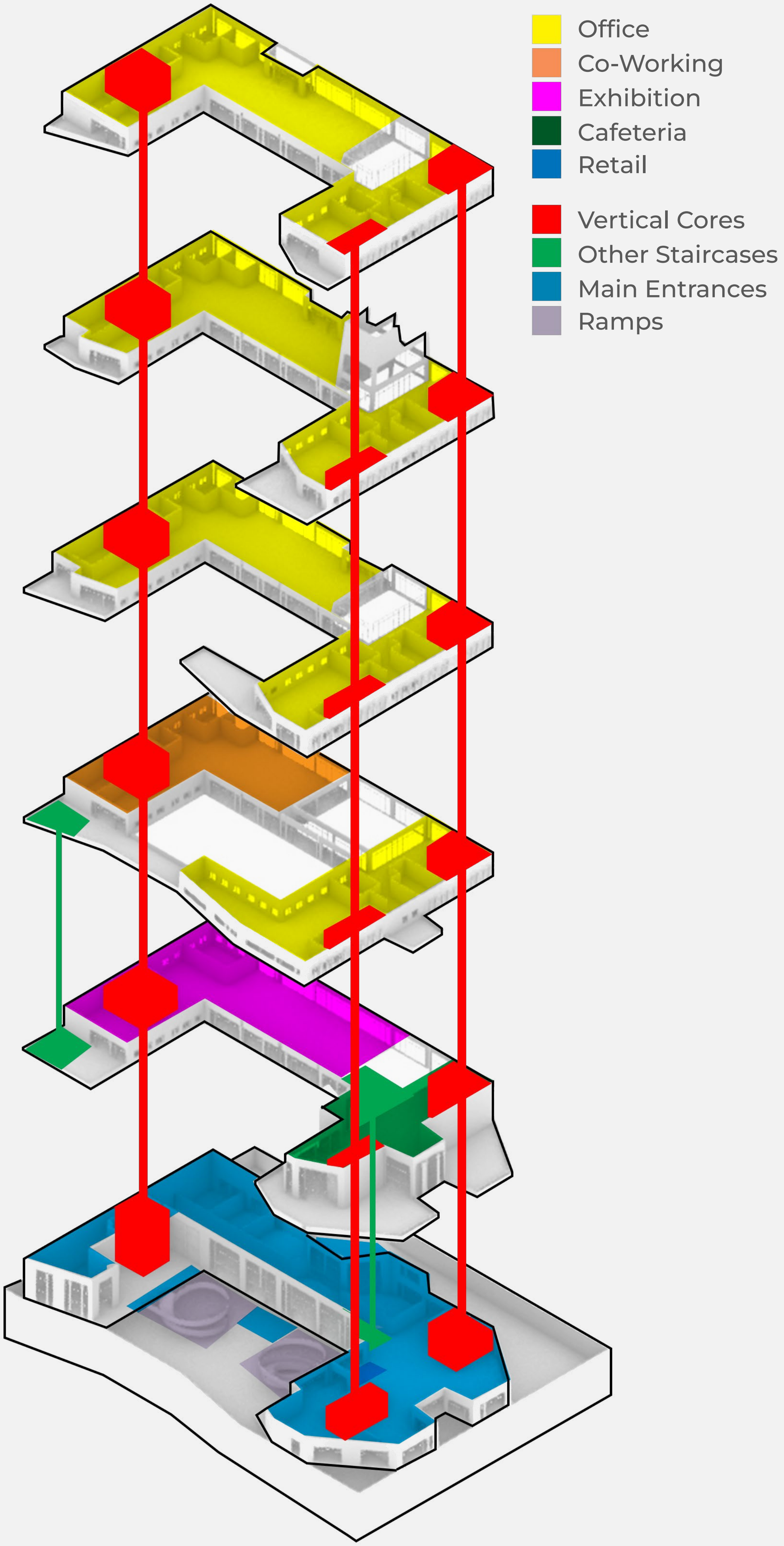
The co-working block was rotated 180° to make terraces, while also forming an intimate courtyard, shielded from the street.



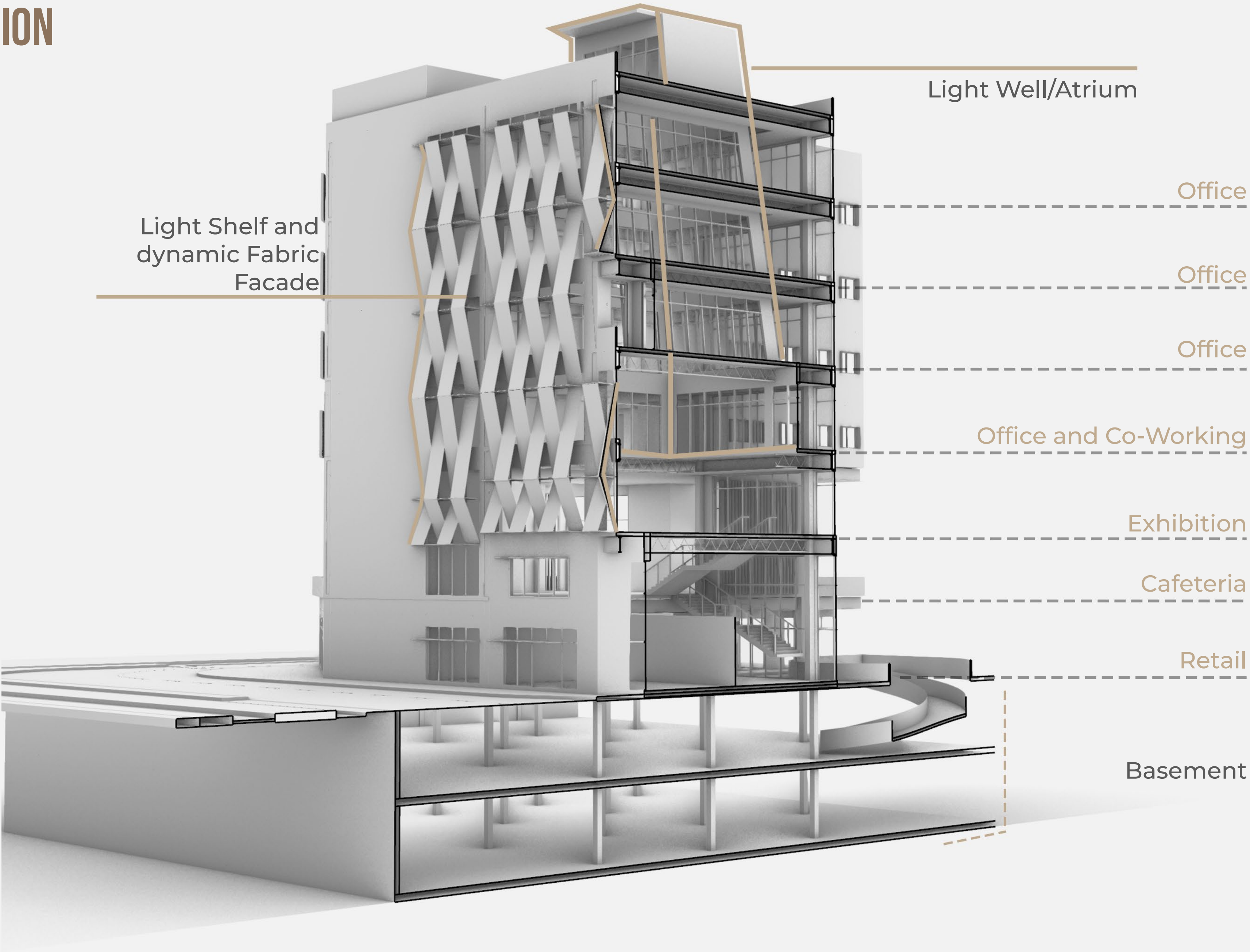
**More Terraces**

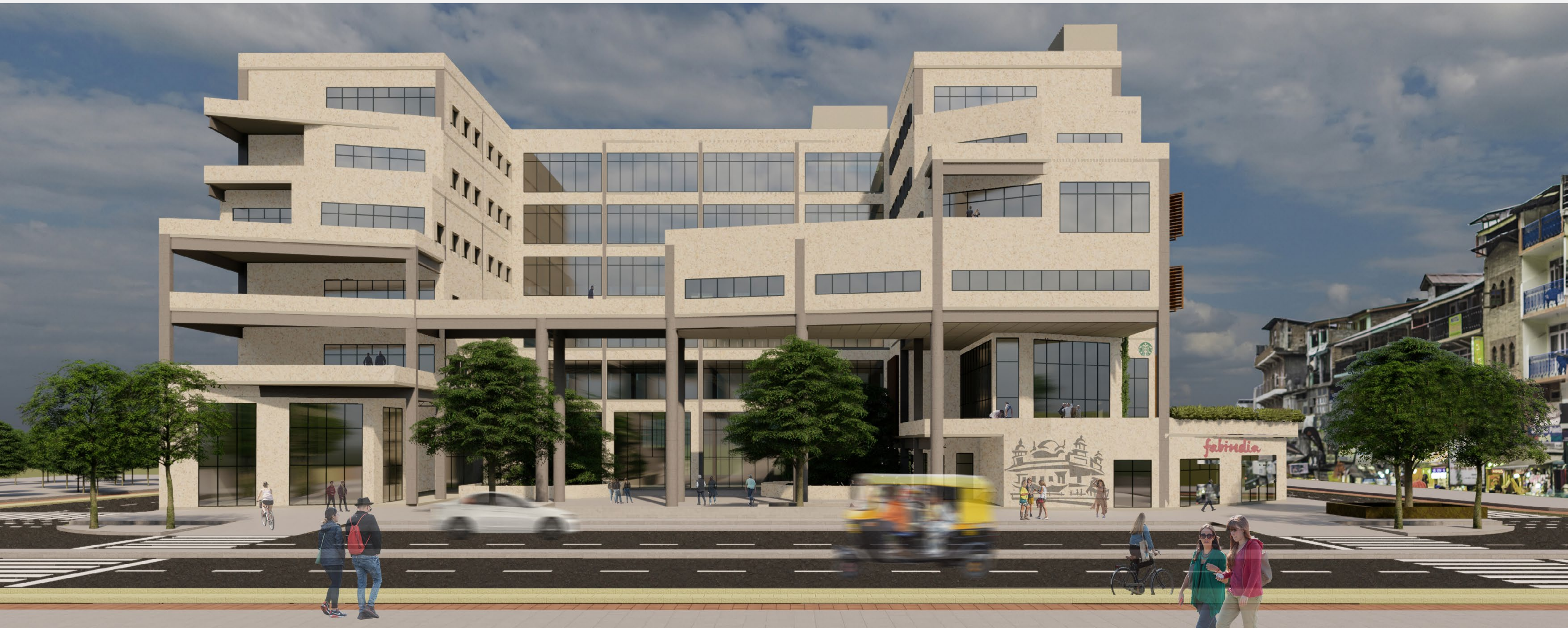
More terraces were cut out on the facade facing the street, in order to establish a visual connect.

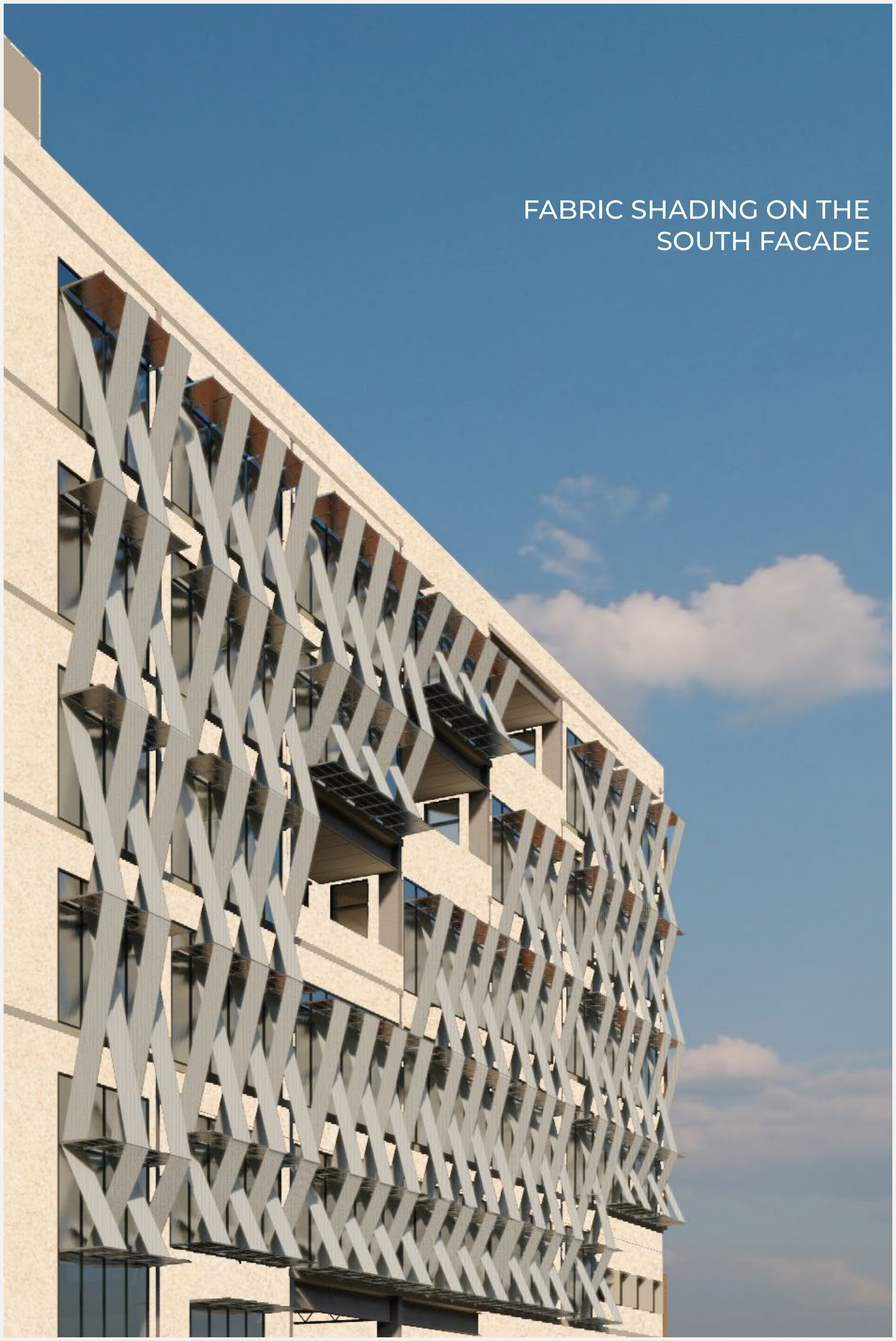
# ZONING



# PART-SECTION

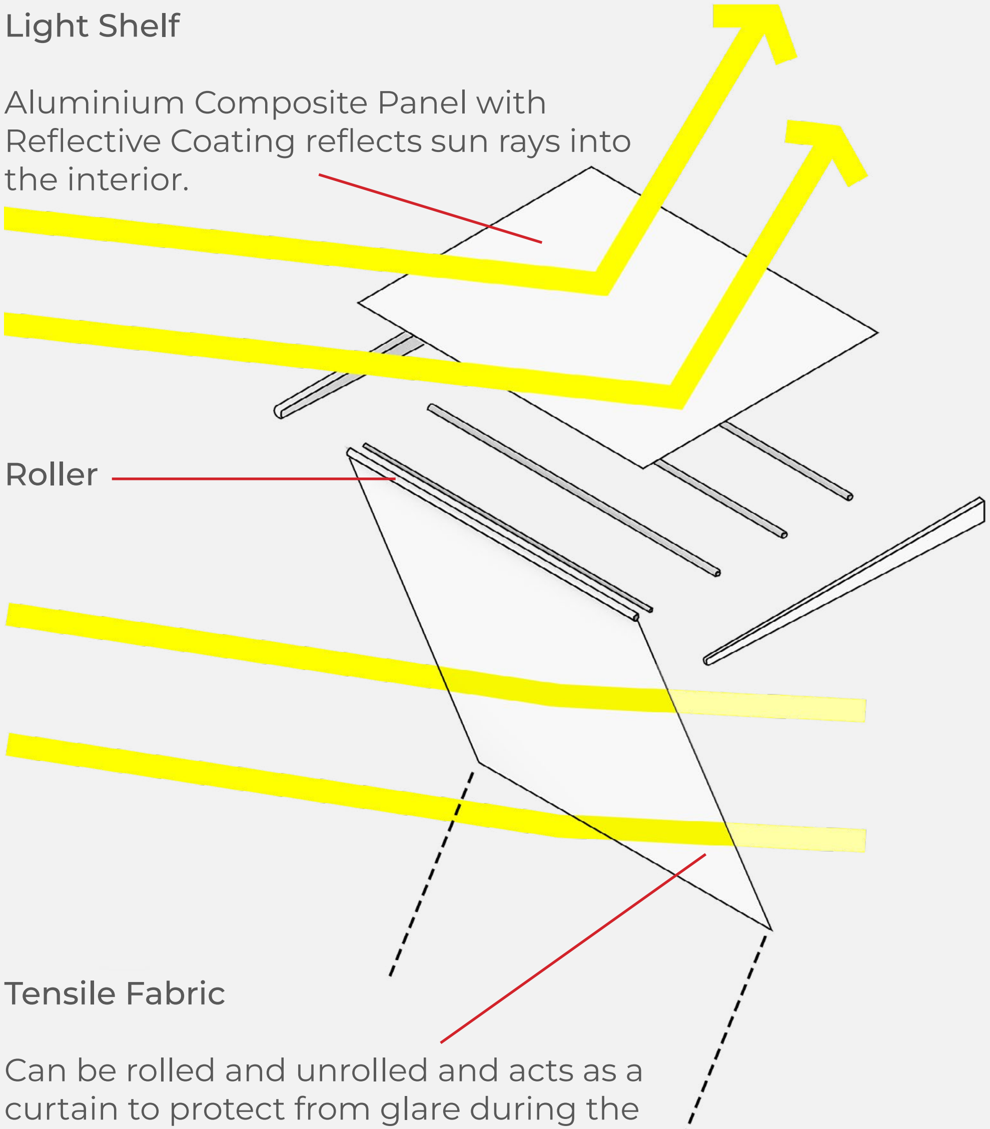






FABRIC SHADING ON THE SOUTH FACADE

## DAYLIGHTING



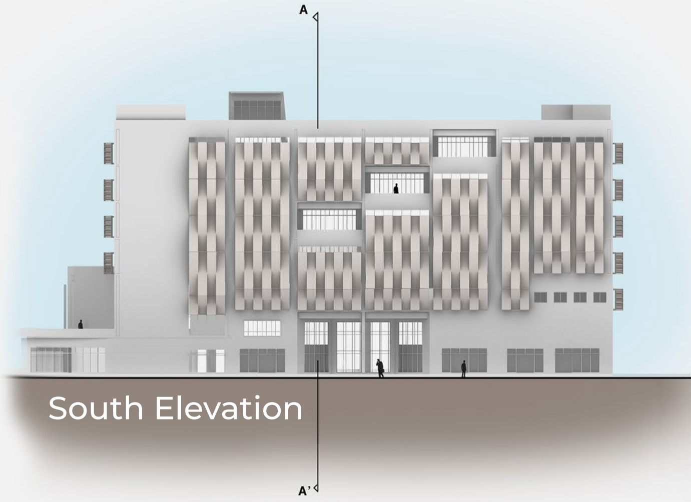
**Light Shelf**

Aluminium Composite Panel with Reflective Coating reflects sun rays into the interior.

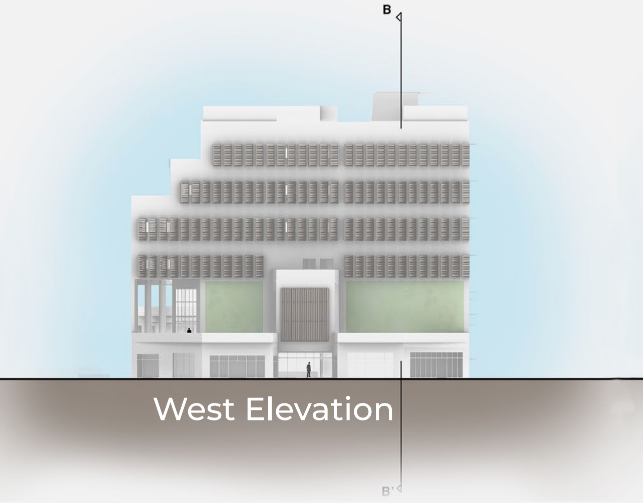
**Roller**

**Tensile Fabric**

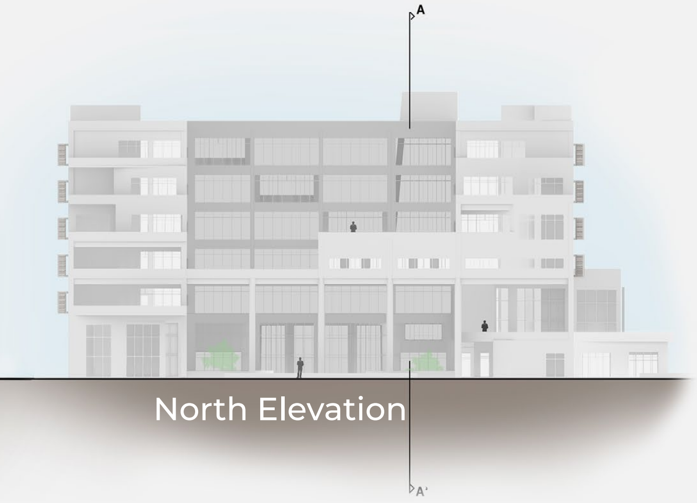
Can be rolled and unrolled and acts as a curtain to protect from glare during the winter.



South Elevation



West Elevation



North Elevation

## EXT

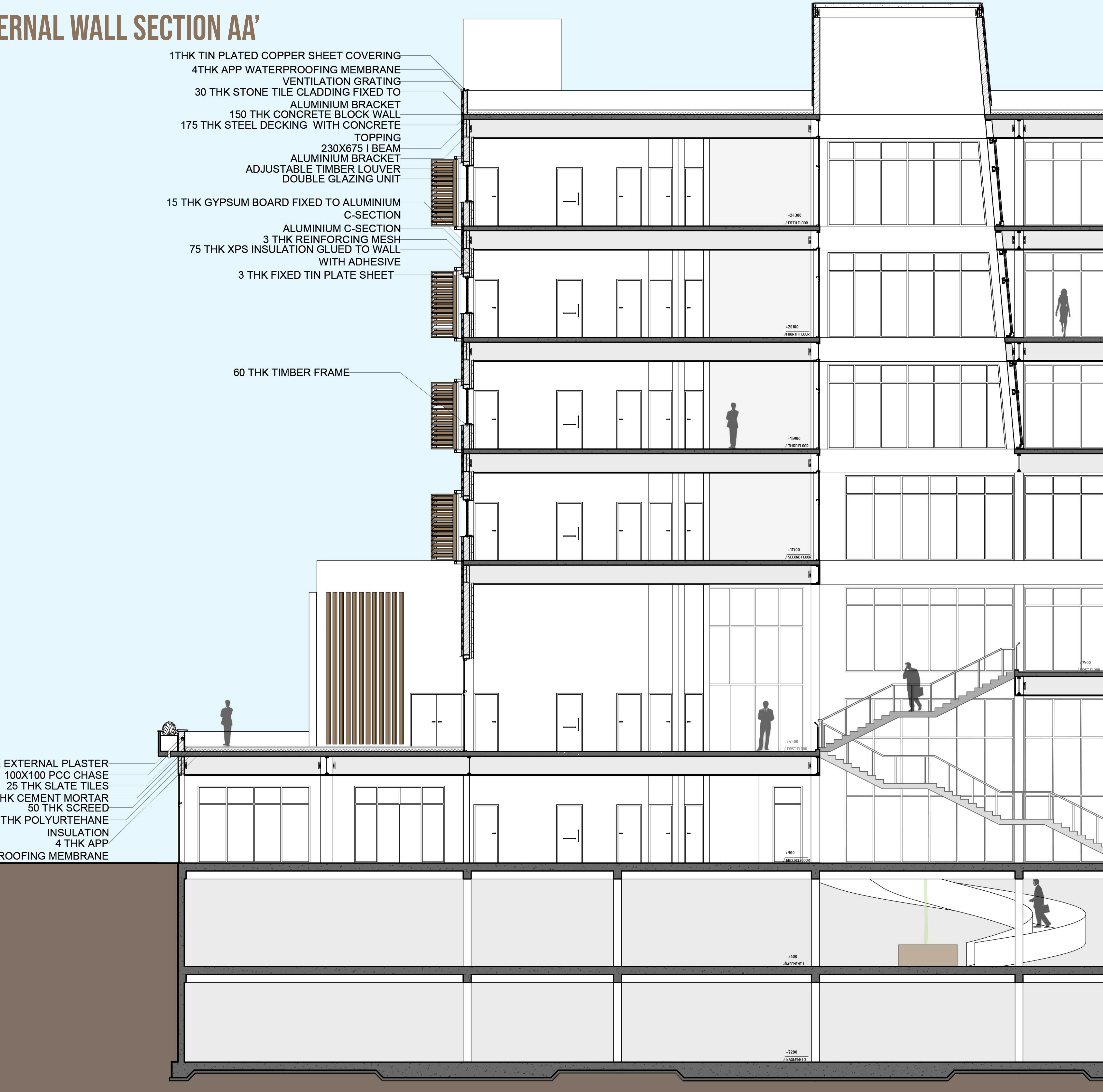
20 THK

20 T

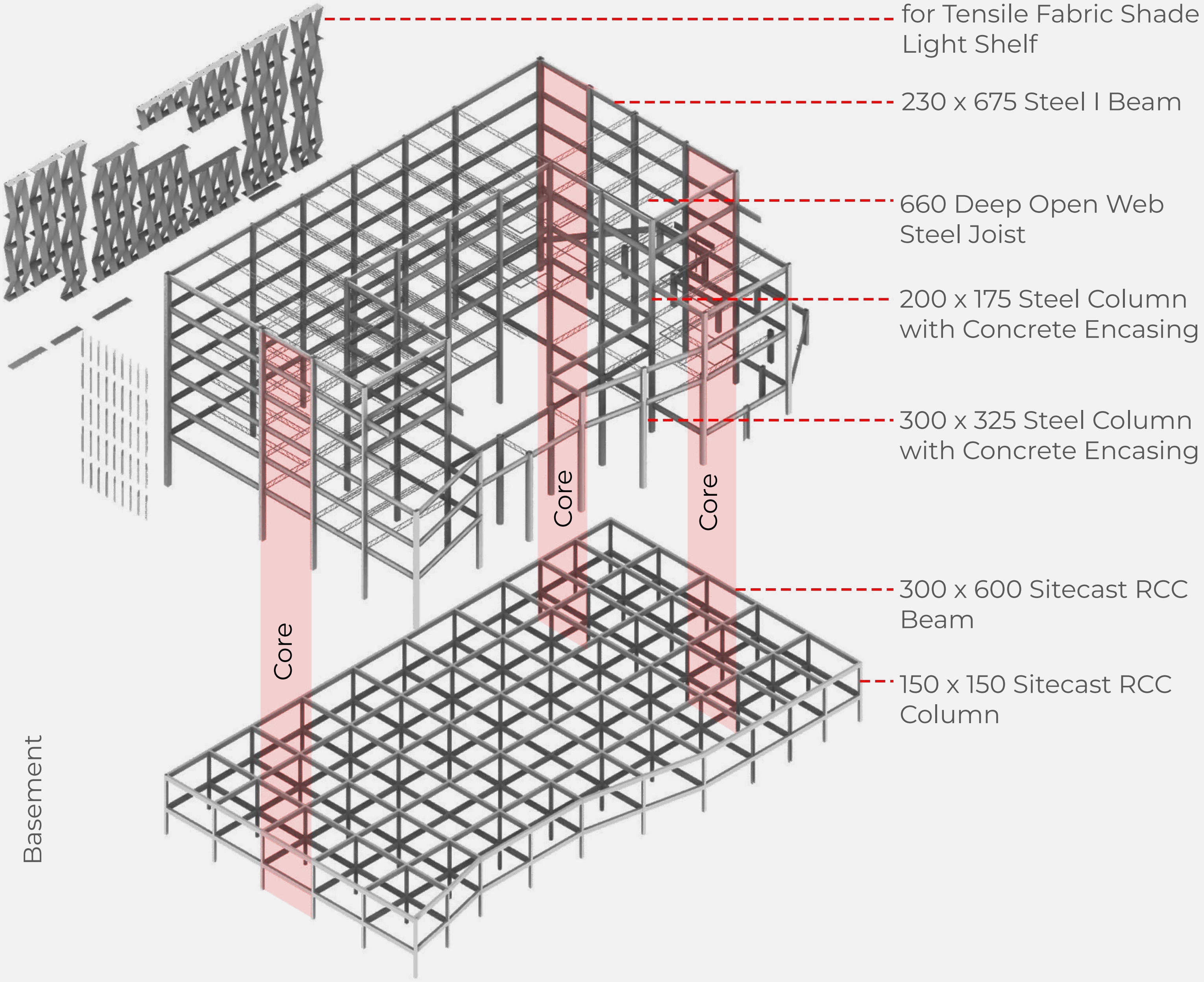
100

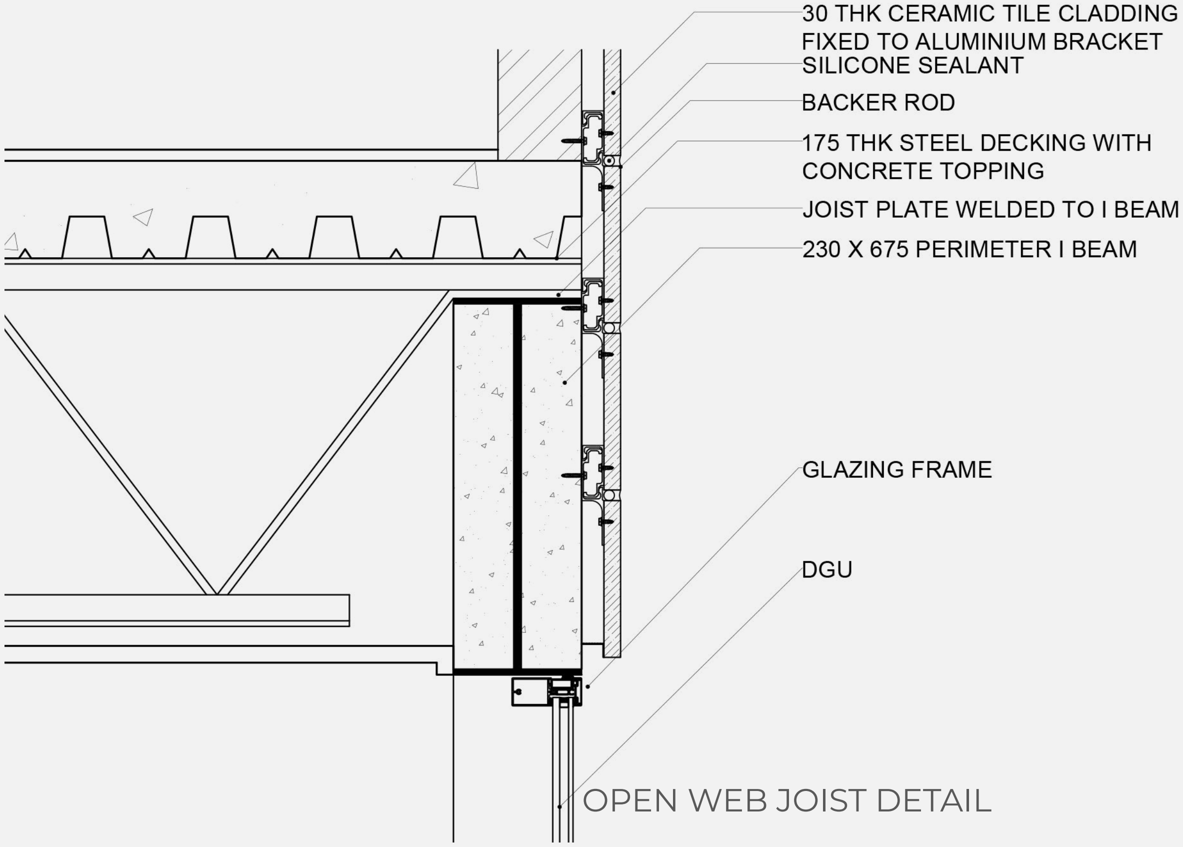
WATERP

# ERNAL WALL SECTION AA'

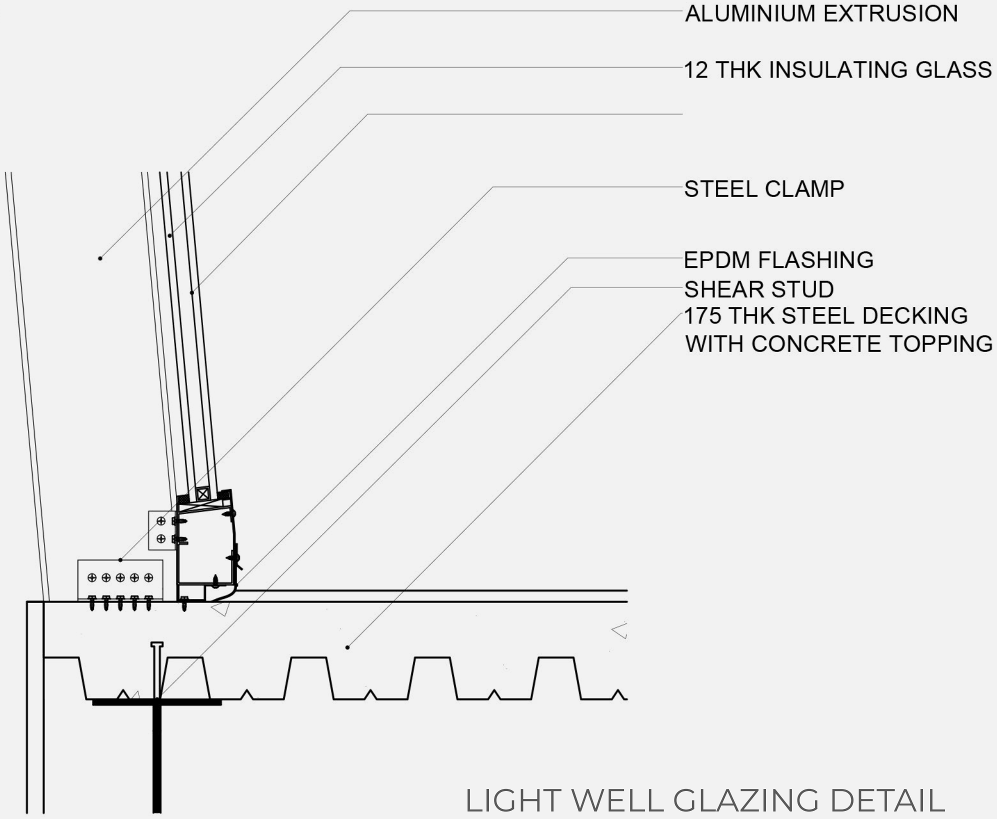


# STRUCTURE


Aluminium Frames and Roller for Tensile Fabric Shade and Light Shelf
230 x 675 Steel I Beam
660 Deep Open Web Steel Joist
200 x 175 Steel Column with Concrete Encasing
300 x 325 Steel Column with Concrete Encasing
Core
Core
Core
300 x 600 Sitecast RCC Beam
150 x 150 Sitecast RCC Column
Basement

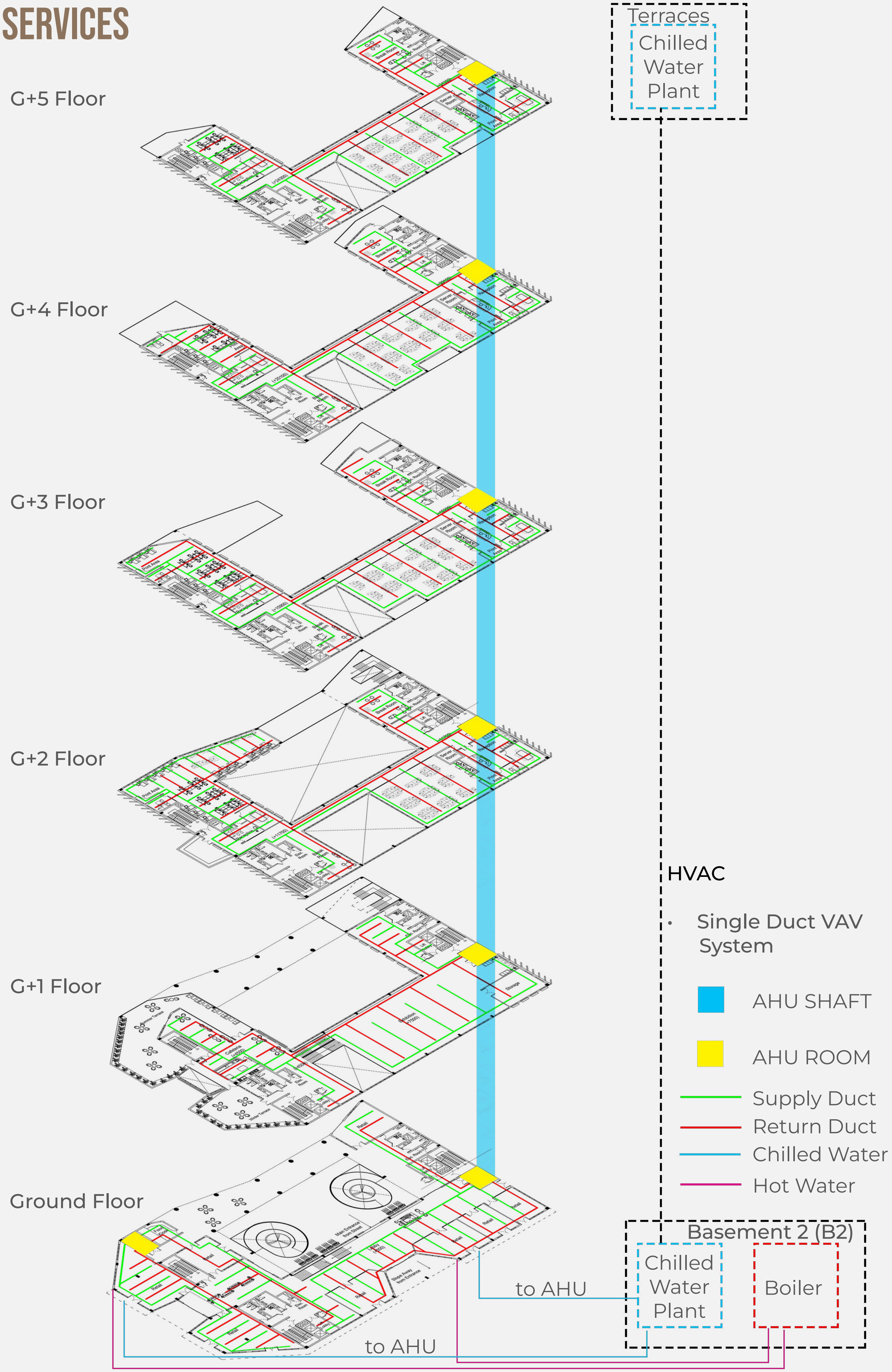

30 THK CERAMIC TILE CLADDING FIXED TO ALUMINIUM BRACKET
SILICONE SEALANT
BACKER ROD
175 THK STEEL DECKING WITH CONCRETE TOPPING
JOIST PLATE WELDED TO I BEAM
230 X 675 PERIMETER I BEAM
GLAZING FRAME
DGU

OPEN WEB JOIST DETAIL



LIGHT WELL GLAZING DETAIL

# SERVICES



G+5 Floor

G+4 Floor

G+3 Floor

G+2 Floor

G+1 Floor

Ground Floor

Terraces

Chilled Water Plant

HVAC

- Single Duct VAV System

🟦 AHU SHAFT

🟨 AHU ROOM

— Supply Duct

— Return Duct

— Chilled Water

— Hot Water

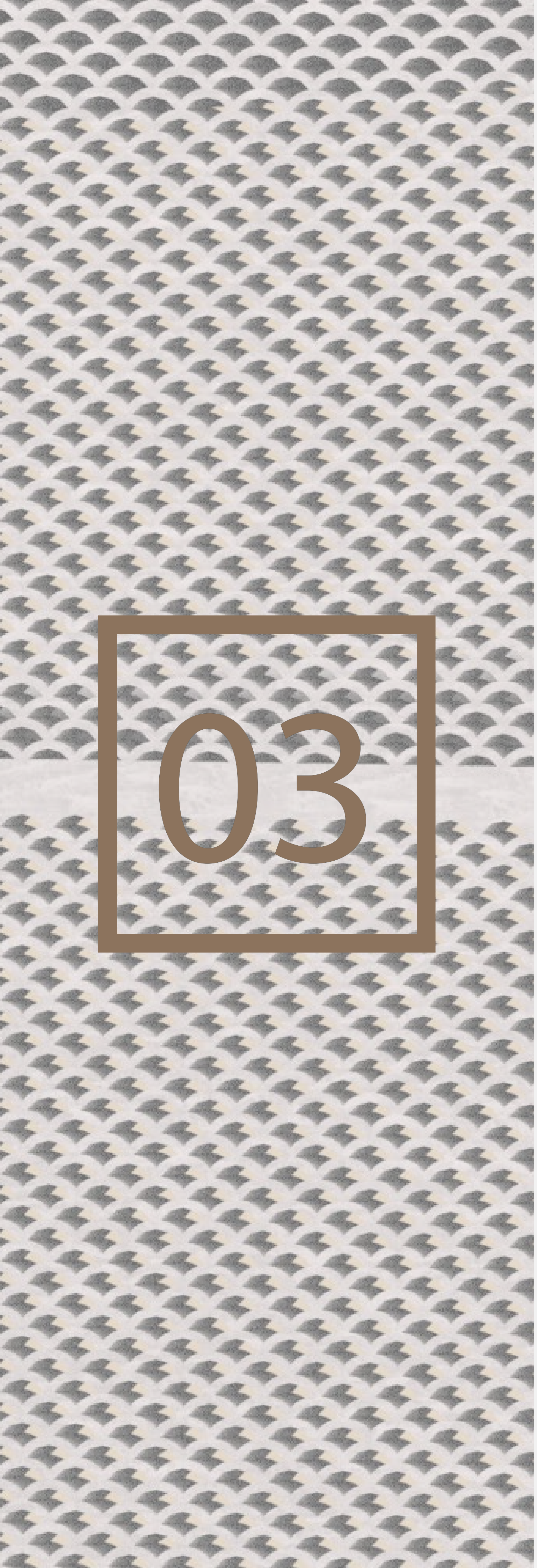
Basement 2 (B2)

Chilled Water Plant

Boiler

to AHU

to AHU



# 03

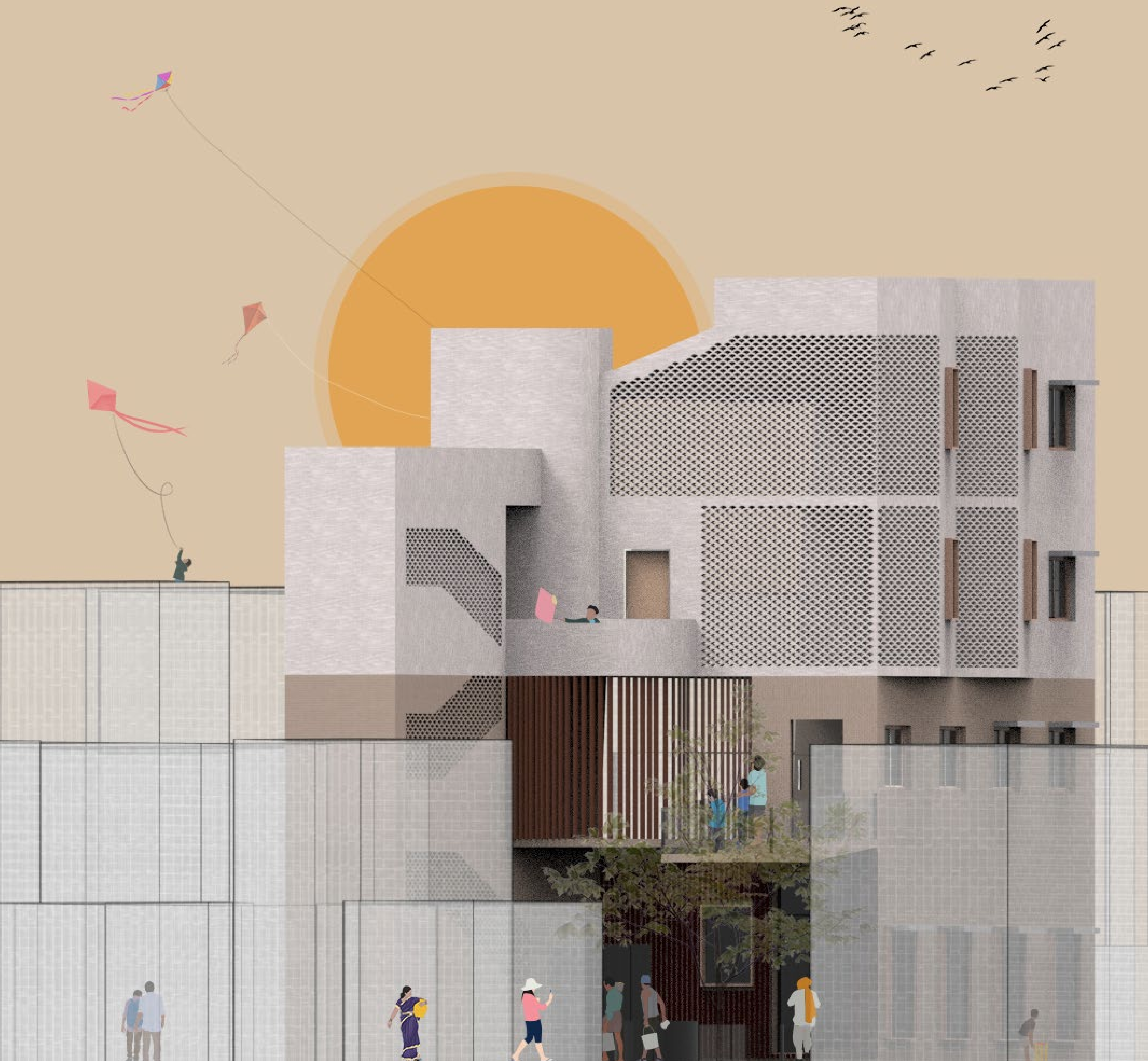
| | |
|---|---|
| **YEAR 2 SEM 3** | **PUBLIC+CRAFT+RES. DESIGN** |
| TYPOLOGY | **Mixed-Use Arts Centre** |
| LOCATION | **Moradabad, Uttar Pradesh, India** |
| SITE AREA | **150m$^2$** |

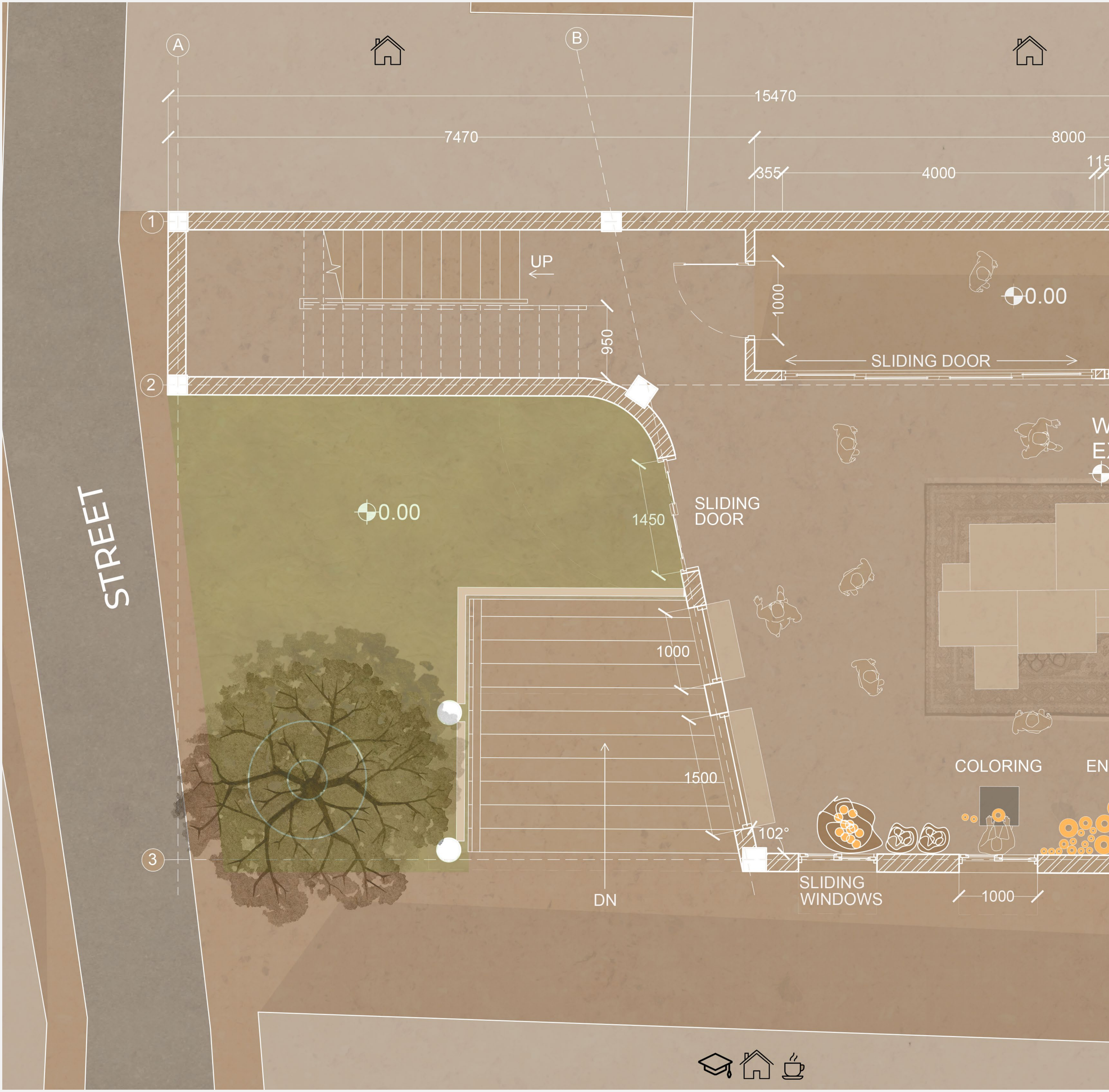
This Studio focuses on an Urban Infill Development in *Bartan Bazaar,* a historical, densely packed district of Moradabad, India; famous for its brass products. The site is located on *trophy gali,* a side street in the district relatively quiter than the main street it branches from. The aim was to incroporate elements of Moradabad's vernacular in the design of the space.

The brief of the design comprises of an interactive information centre (*public*), learning centre (*craft*), and a residential element. This brief is based on how most Moradabadis in the old districts live and work on their craft in the same building.

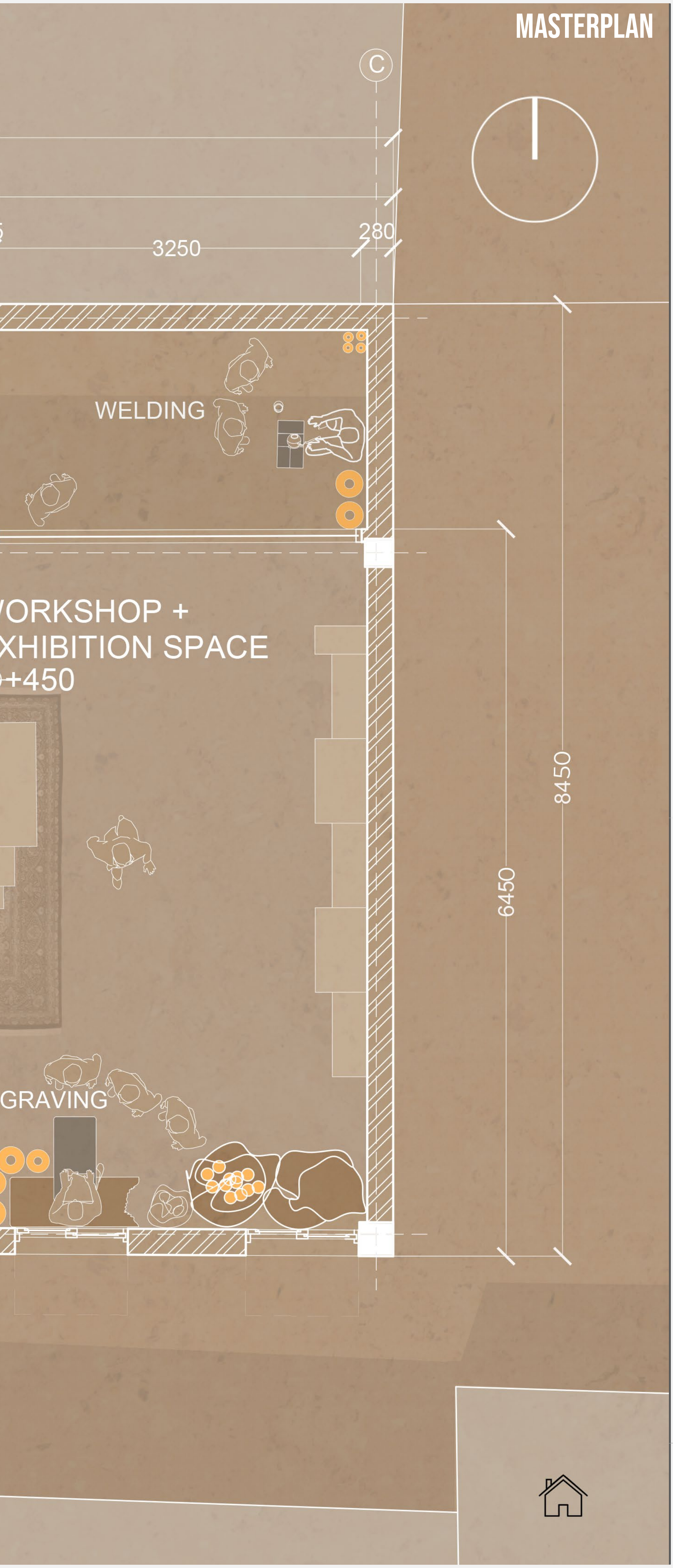
My concept was based on the public and craft functions being interwined with one another, while the residential stays independent and more private.

AUTOCAD | RHINO | GRASSHOPPER | PHOTOSHOP | KEYSHOT
LUMION

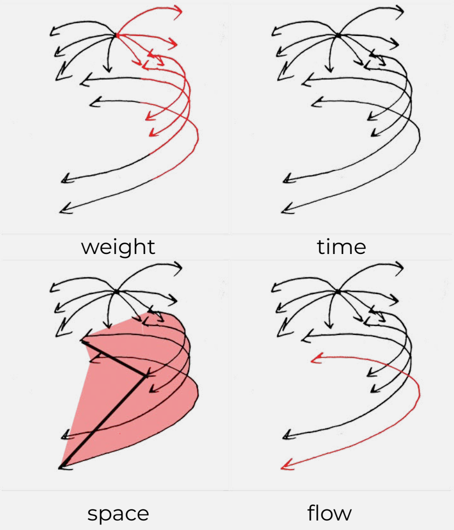



A
B
15470
7470
8000
115
355
4000
1
UP
1000
950
0.00
SLIDING DOOR
2
W
E
STREET
0.00
1450
SLIDING
DOOR
1000
1500
102°
COLORING
EN
3
DN
SLIDING
WINDOWS
1000

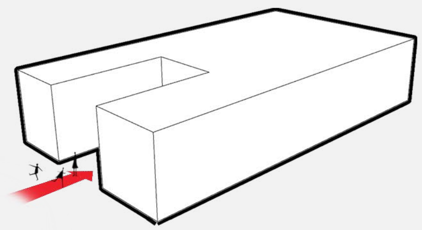
## MASTERPLAN



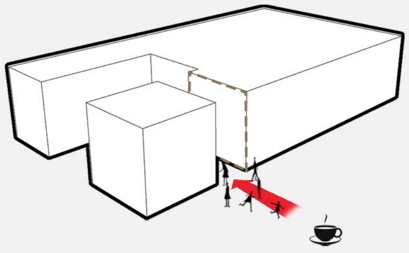
## FORM DEVELOPMENT



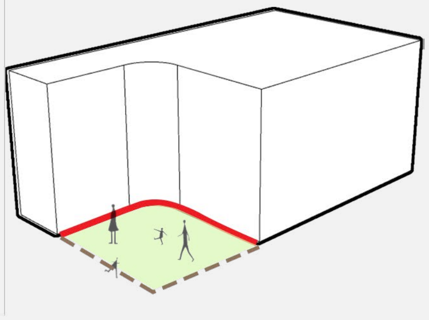
Concept Diagrams



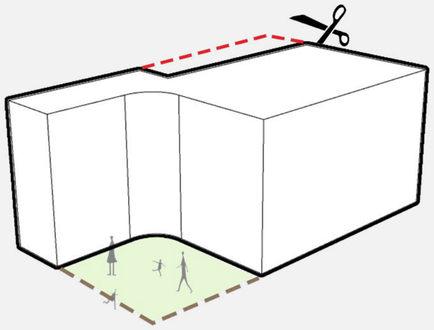
Initial Form Derived from Concept Diagrams



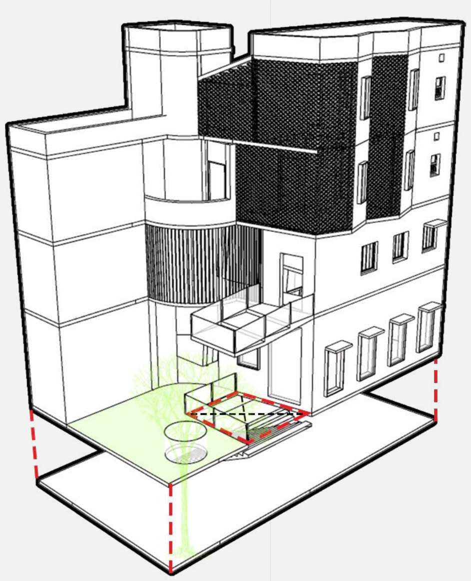
Fragmenting the block to provide access from shops.



Vertical Expansion, More Open Space and Green Patchs



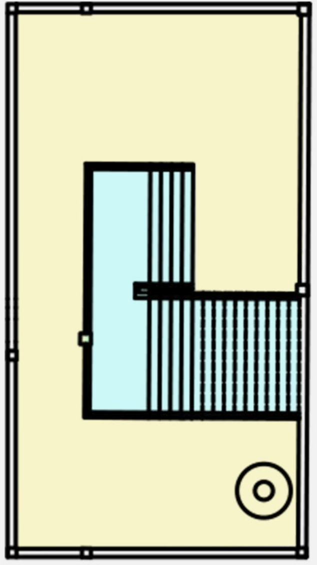
Semi-Public Open Spaces at the back for welding workshops.



Staircase cutout on the ‘courtyard’ for access to library

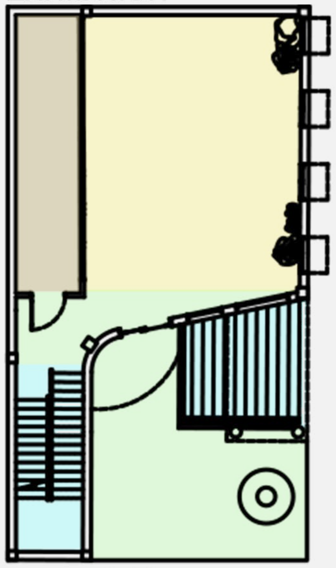
# SPATIAL PLANNING

Library



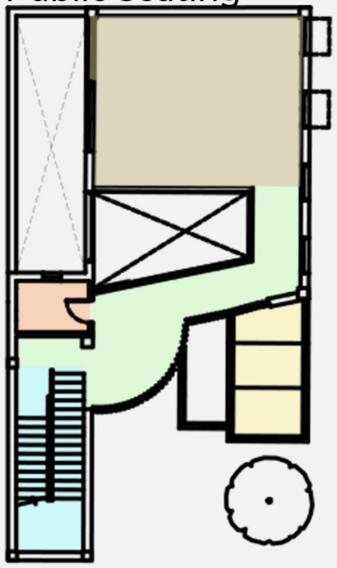
Basement

Workshop +
Exhibition



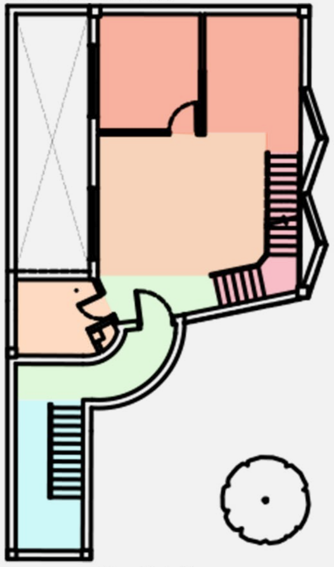
G Floor

Classroom +
Public Seating



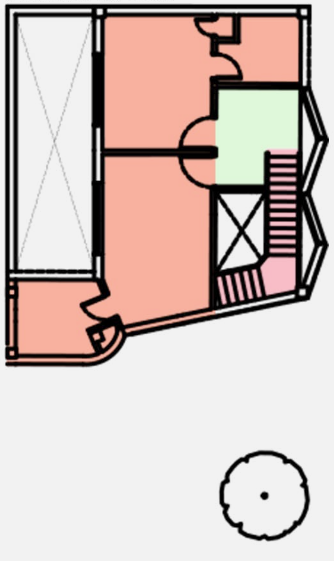
G+1 Floor

Residence



G+2 Floor

Residence



G+3 Floor

- 🟦 External Circulation
- 🟩 Transition Spaces
- 🟪 Internal Circulation

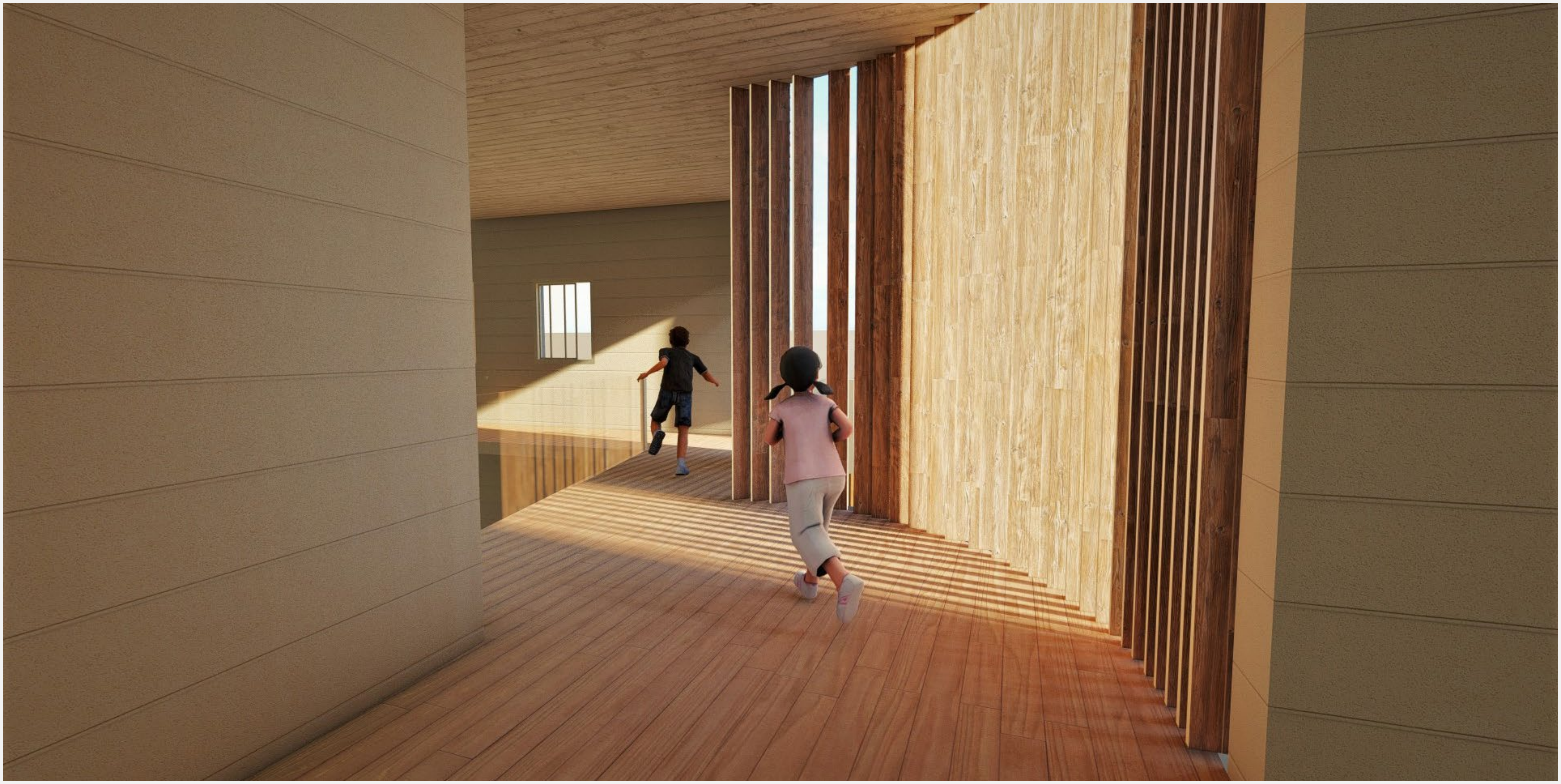
## Circulation

The residential spaces have internal circulation to ensure privacy.

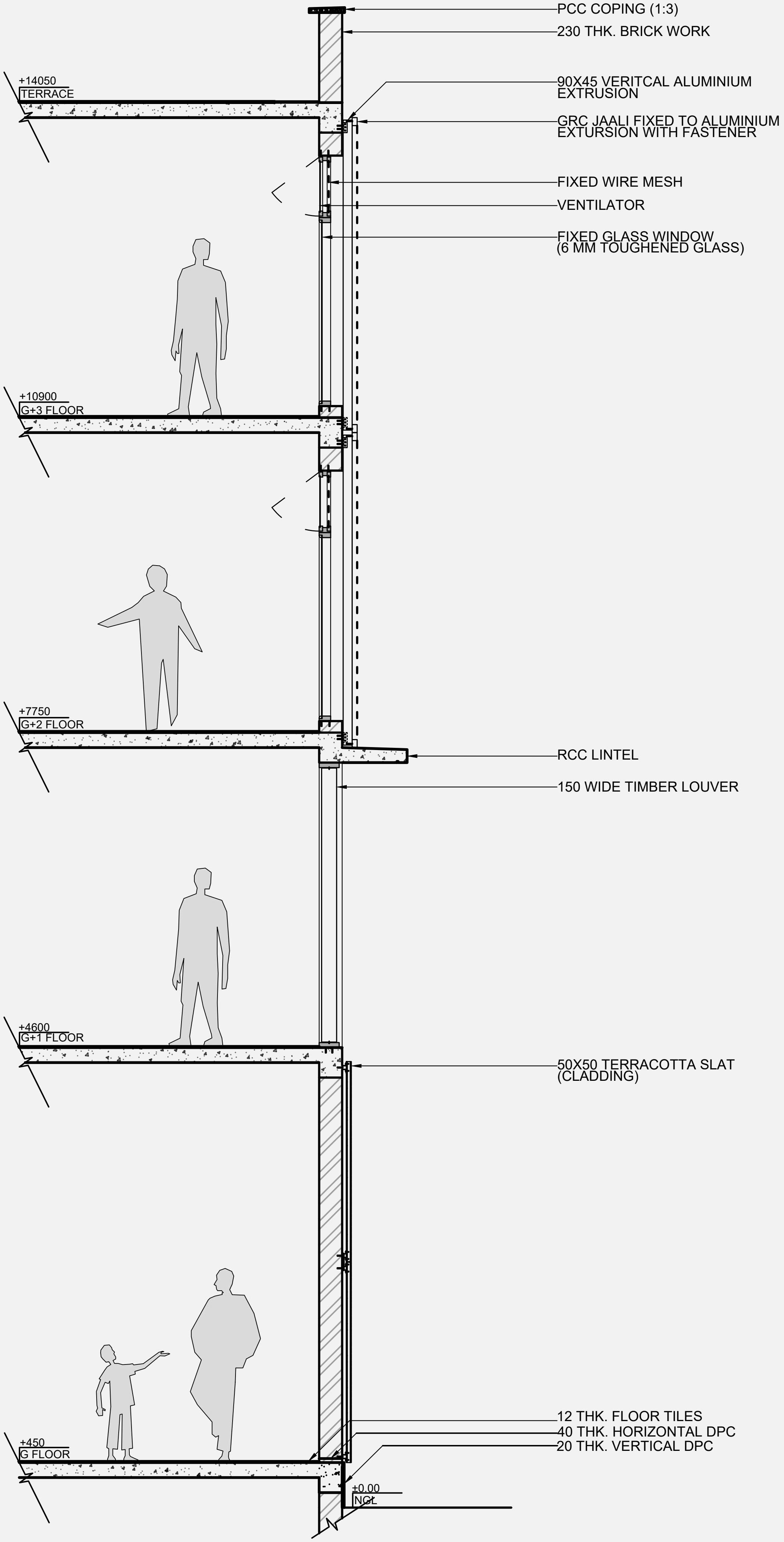
- 🟨 Public
- ⬜ Semi-Public
- 🟧 Semi-Private
- 🟥 Private

## Hierarchy

The hierarchy of spaces goes up from public to private as we go up. The size of transition spaces is smaller in private spaces and more intimate.

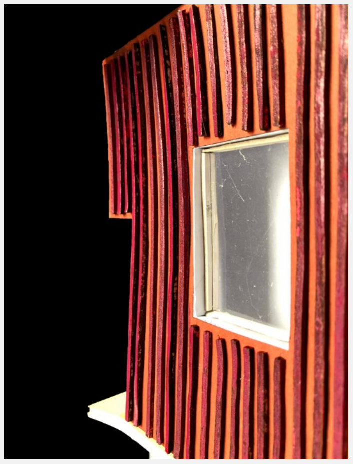


# EXTERNAL WALL SECTION

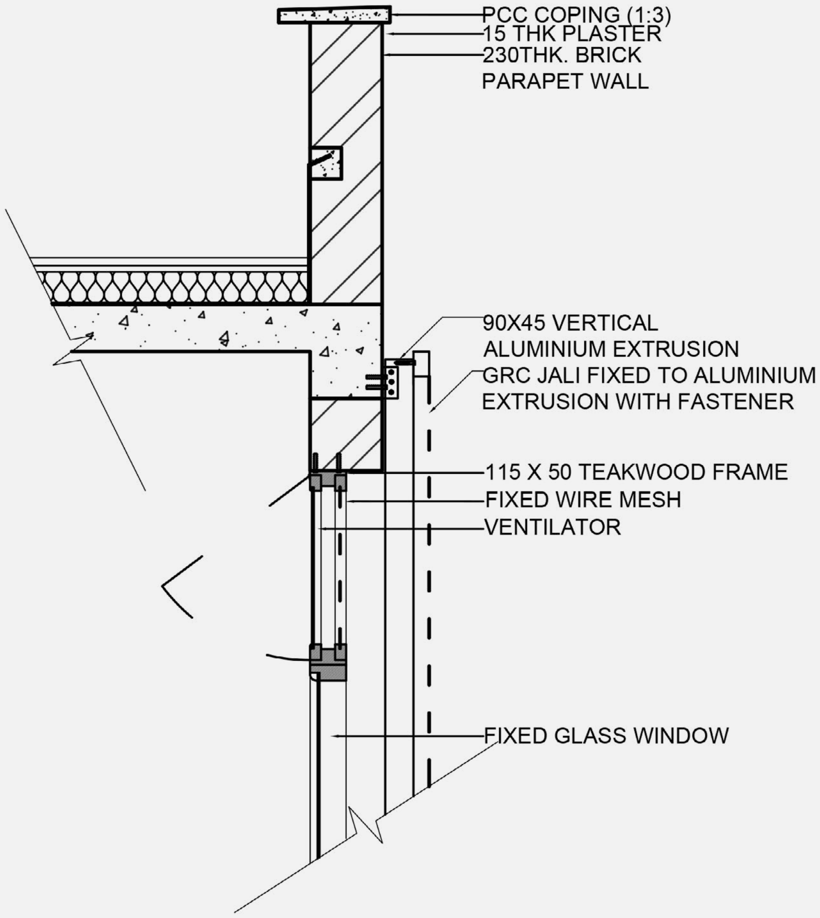


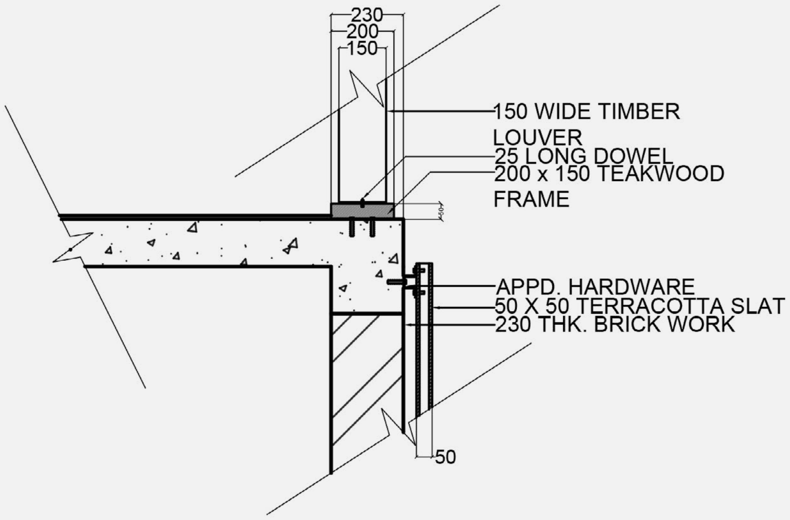
GRC JALI

TIMBER LOUVERS

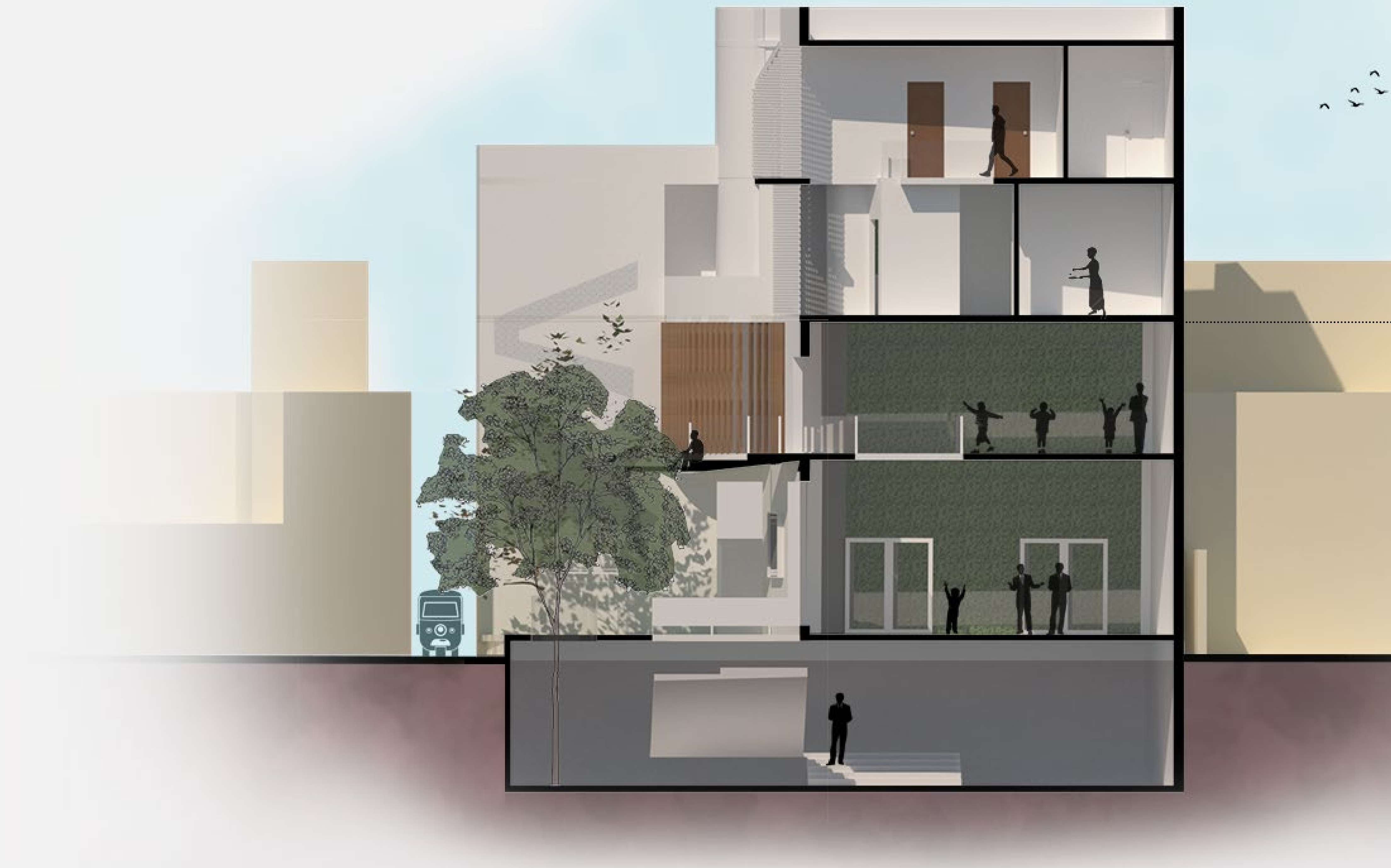


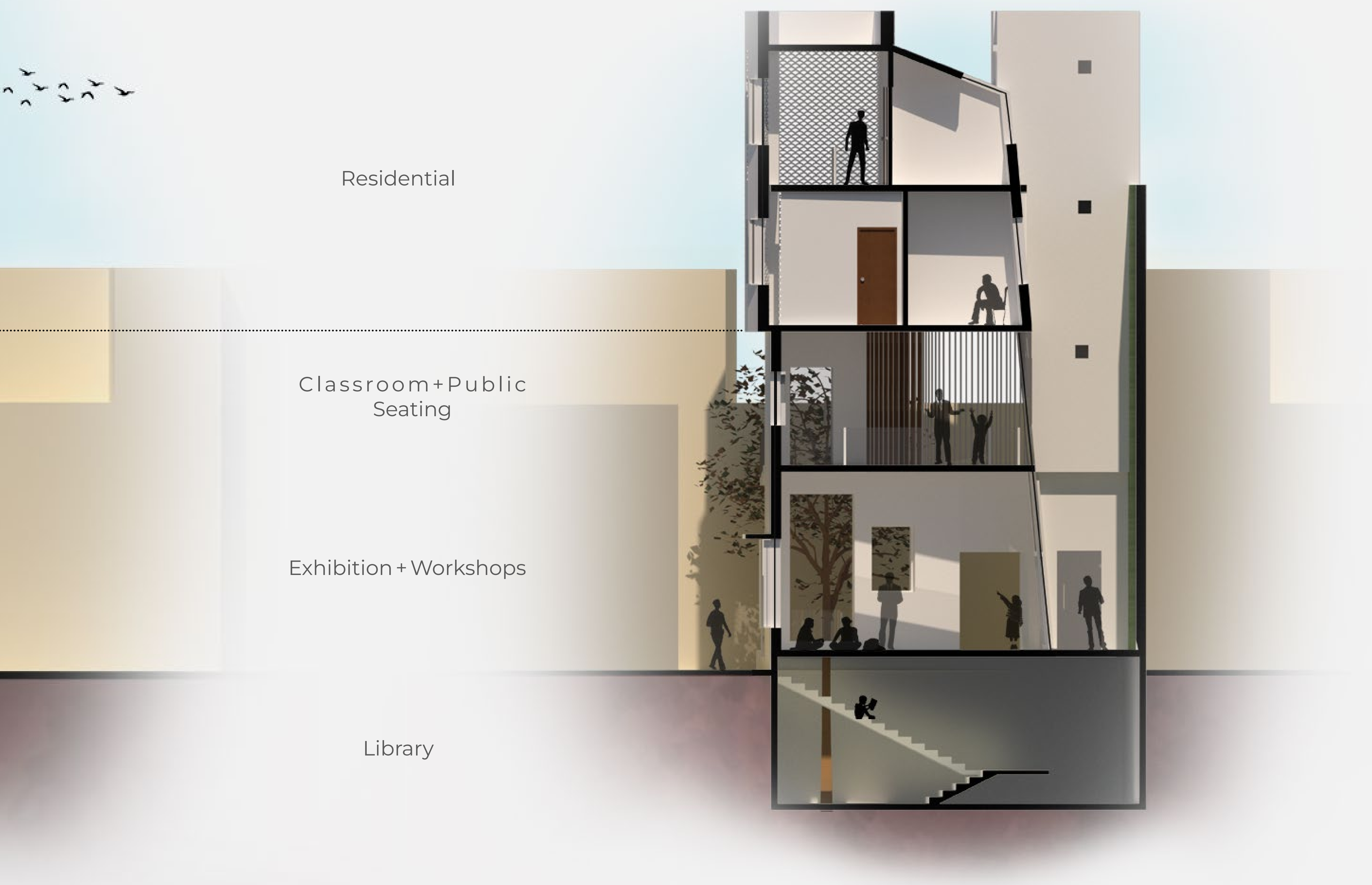
TERRACOTTA SLATS


PCC COPING (1:3)
15 THK PLASTER
230THK. BRICK PARAPET WALL
90X45 VERTICAL ALUMINIUM EXTRUSION
GRC JALI FIXED TO ALUMINIUM EXTRUSION WITH FASTENER
115 X 50 TEAKWOOD FRAME
FIXED WIRE MESH
VENTILATOR
FIXED GLASS WINDOW



# SECTIONS





Residential

Classroom + Public Seating

Exhibition + Workshops

Library

YEAR 2 SEM 4

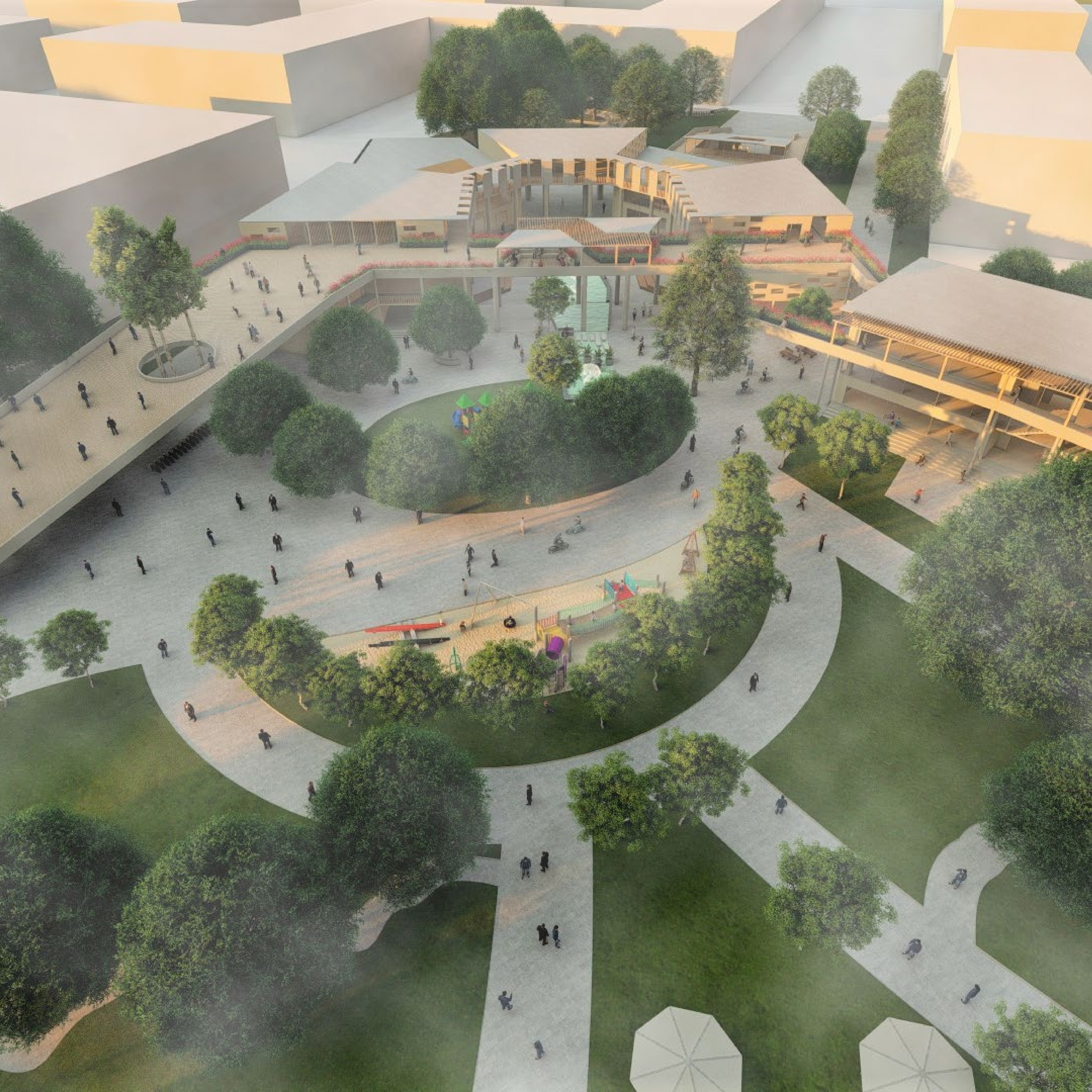
## CHANDIGARH URBAN RENEWAL

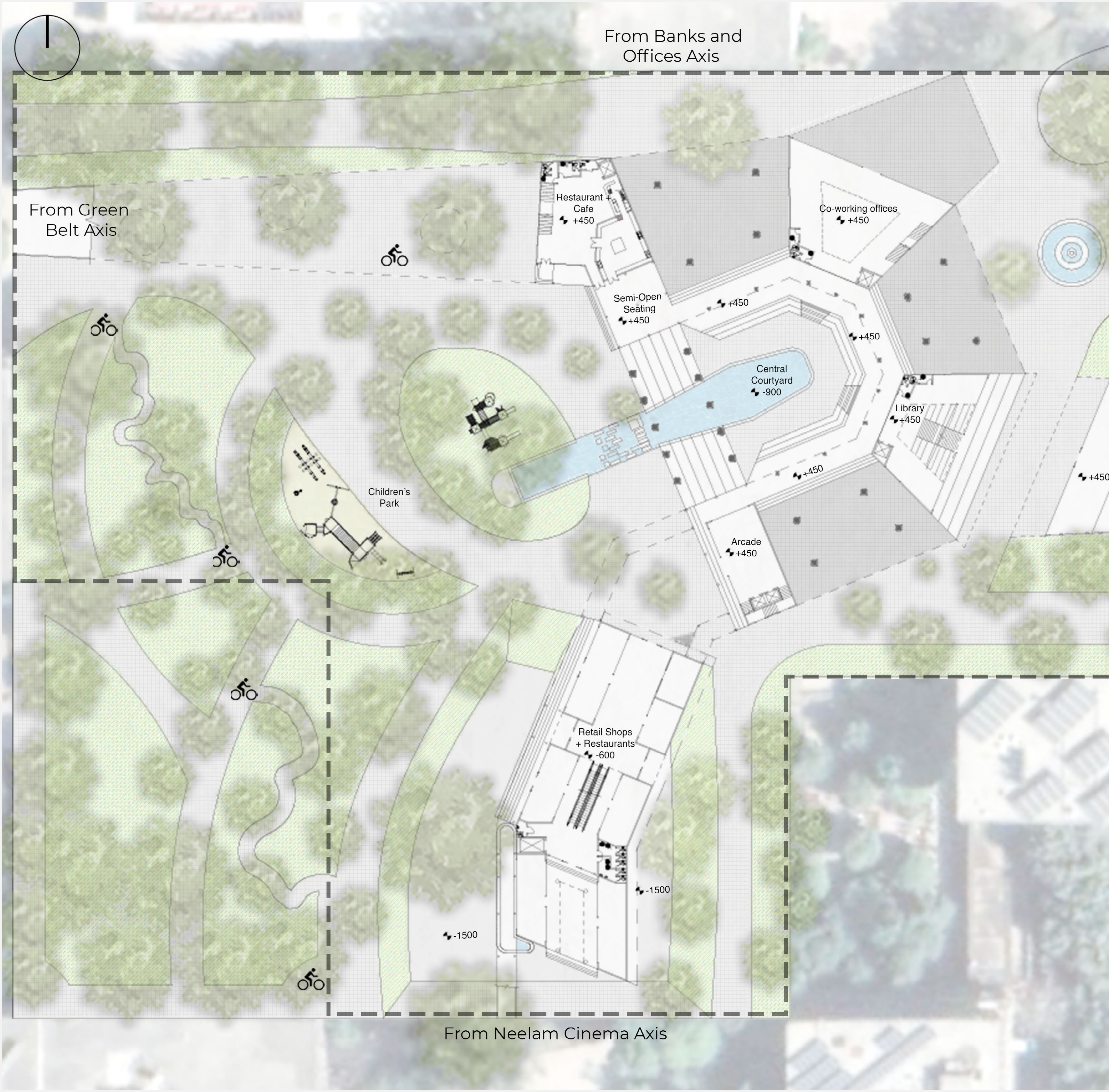
| | |
|---|---|
| TYPOLOGY | Mixed-Use Commercial |
| LOCATION | Chandigarh, India |
| SITE AREA | 25000m$^2$ |

Sector 17, once the 'heart' of the Corbusier-Planned Chandigarh city has been in a state of decline over the past few years as businesses shift elsewhere into new malls. Some of the driving factors behind this gradual decline are the huge open plazas which are not appropriate for Chandigarh summers, lack of public seating/amenities, lack of any institutional/cultural centres in the vicinity.

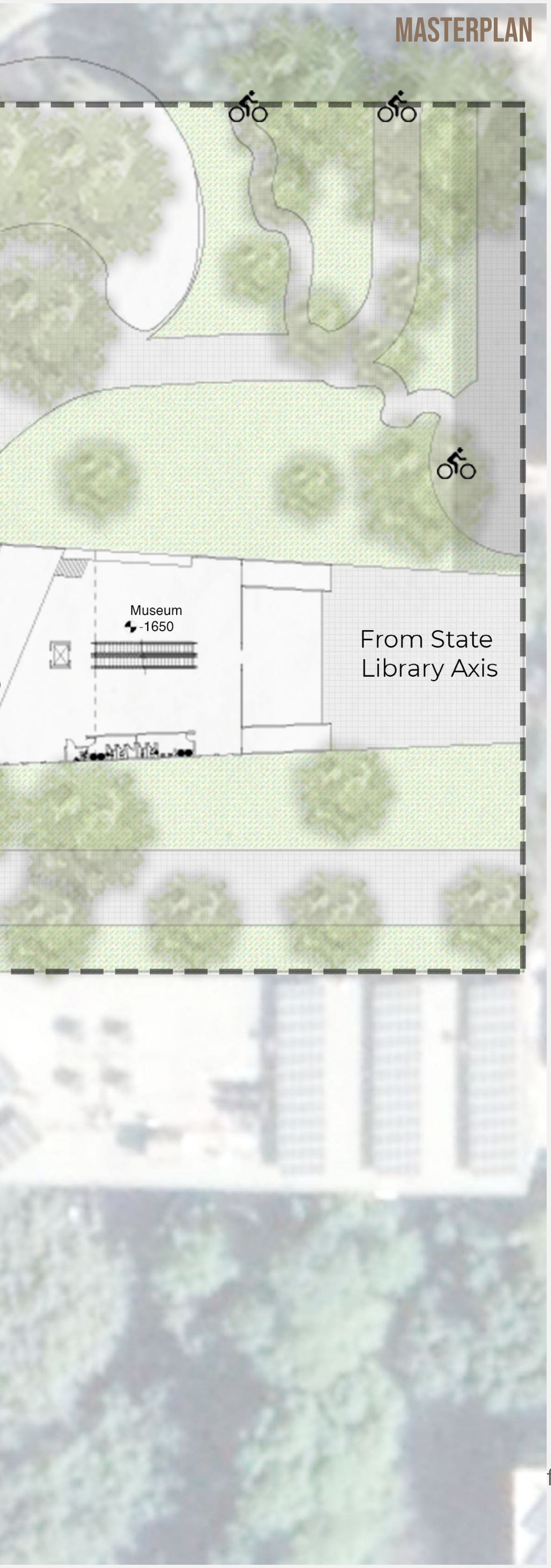
The aim of this project was to design a brand new urban-park in sector 17 on an unused plot of land and incorporate spaces of interaction, knowledge, appreciation and consumption into it. My concept was to place each of these spaces on one of the four unused axes of the site and and enable a fluidic, continuous connection between them, while respecting Corbusier's design principles.

AUTOCAD | SKETCHUP | PHOTOSHOP | ILLUSTRATOR
LUMION

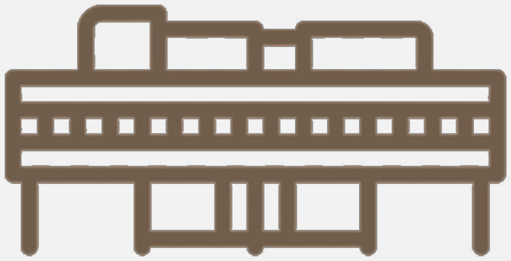



From Banks and Offices Axis
From Green Belt Axis
Restaurant + Cafe
+450
Co-working offices
+450
Semi-Open Seating
+450
+450
+450
Central Courtyard
-900
Library
+450
+450
+450
Children's Park
Arcade
+450
Retail Shops + Restaurants
-600
-1500
-1500
From Neelam Cinema Axis

## MASTERPLAN

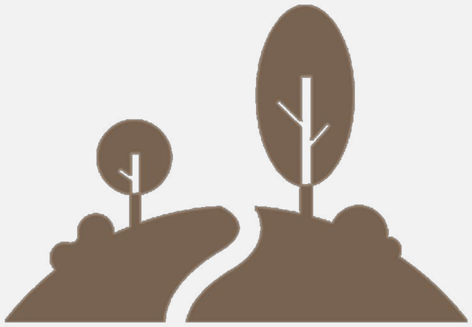


## CONCEPT AND STRATEGIES



**Corbusier’s Design Principles**

for a modernist and minimalist form and facade



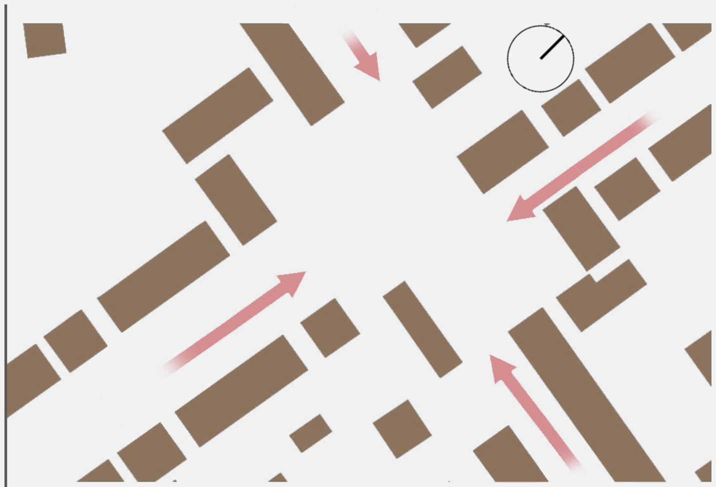
**Urban Park**

converting the square into an urban park in the middle of sector 17

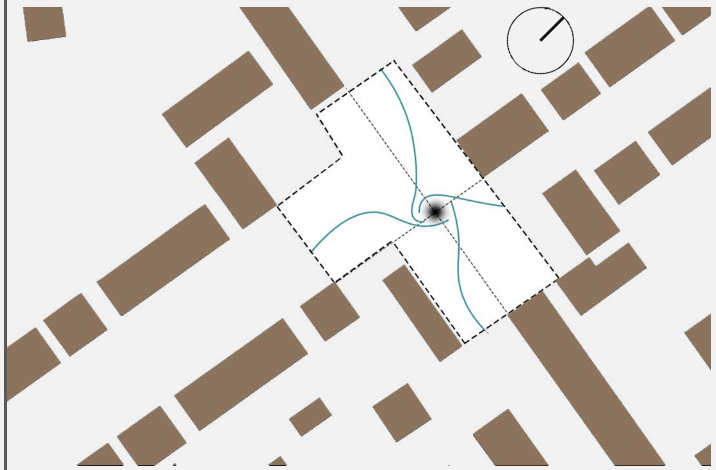
**Elevated Paths**

for a fluid, continuous circulation through and their function as spaces of appreciation

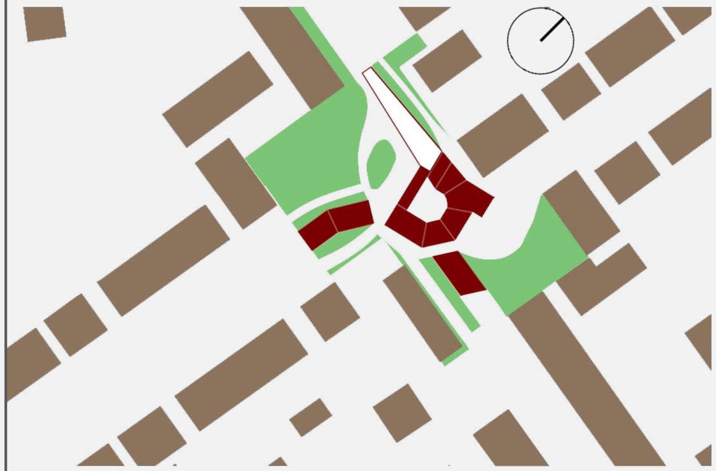
## GENERATIVE DIAGRAMS



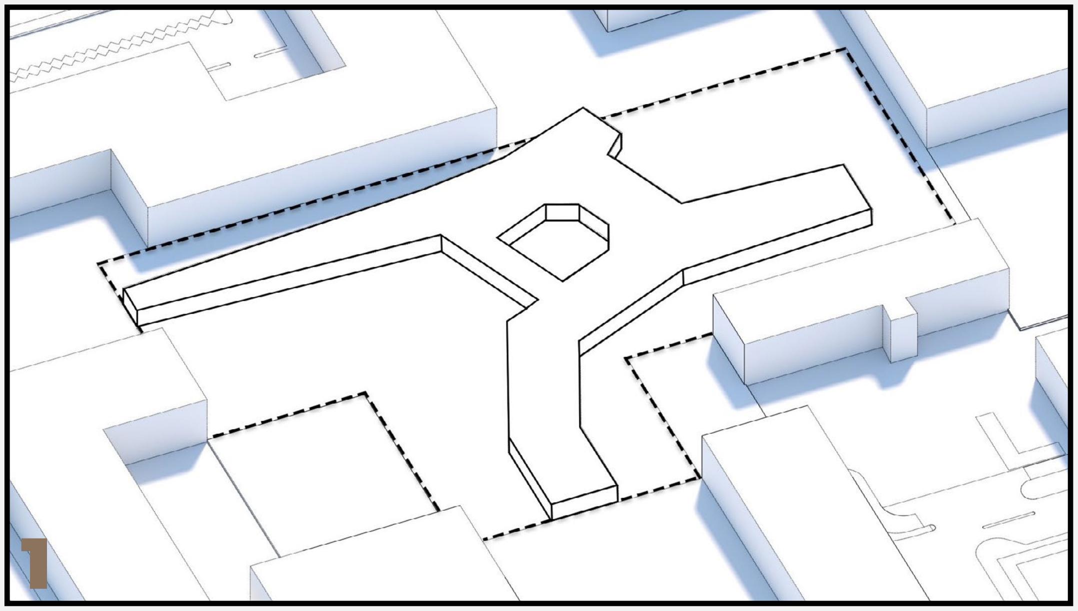
Identification of Axes



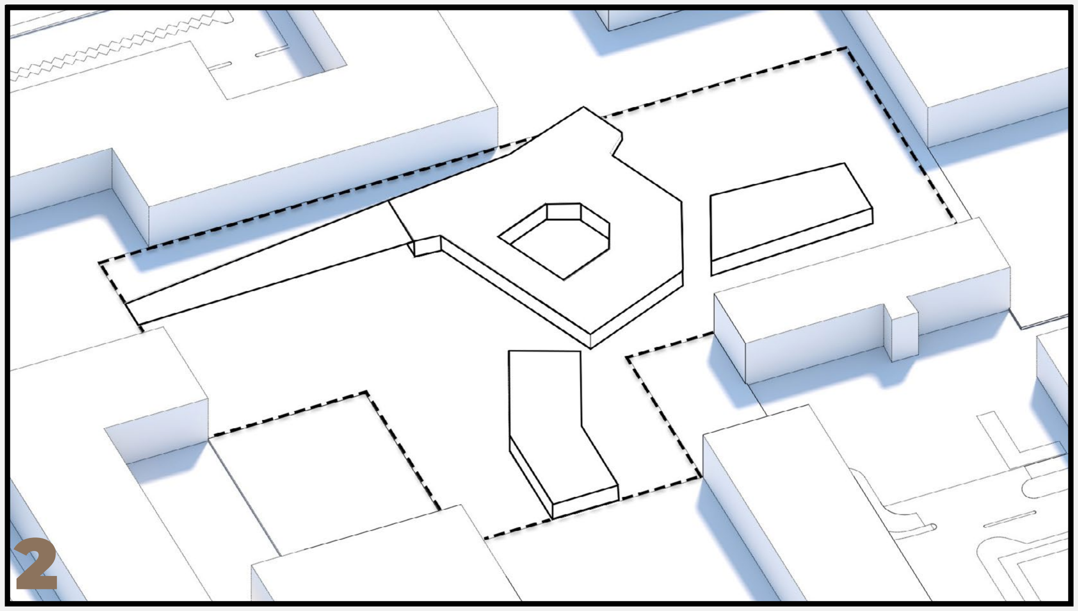
Extension and Intersection at Focal Point



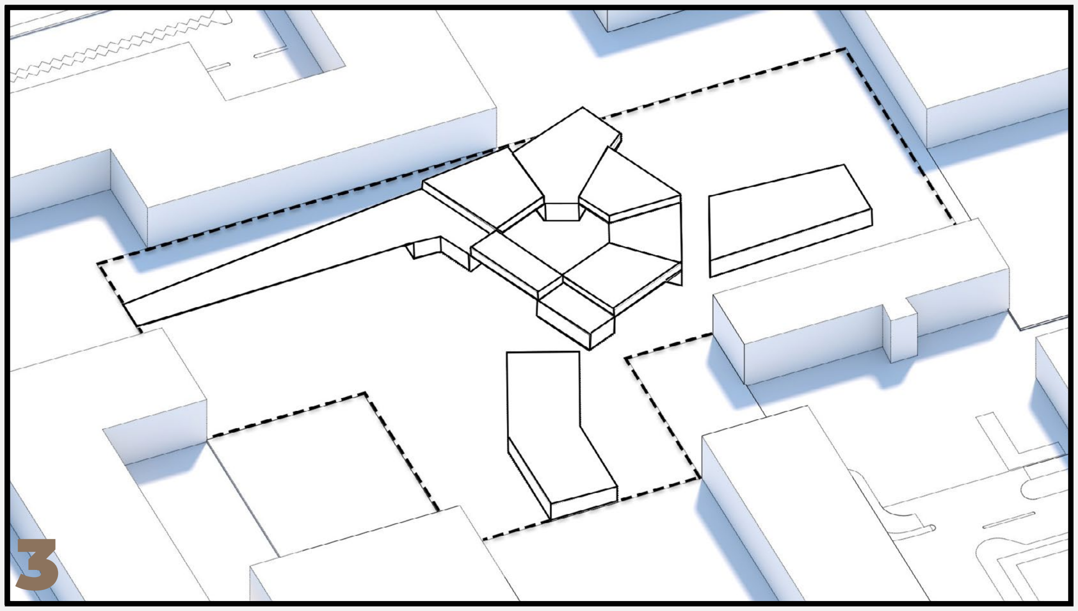
Derivation of Spaces



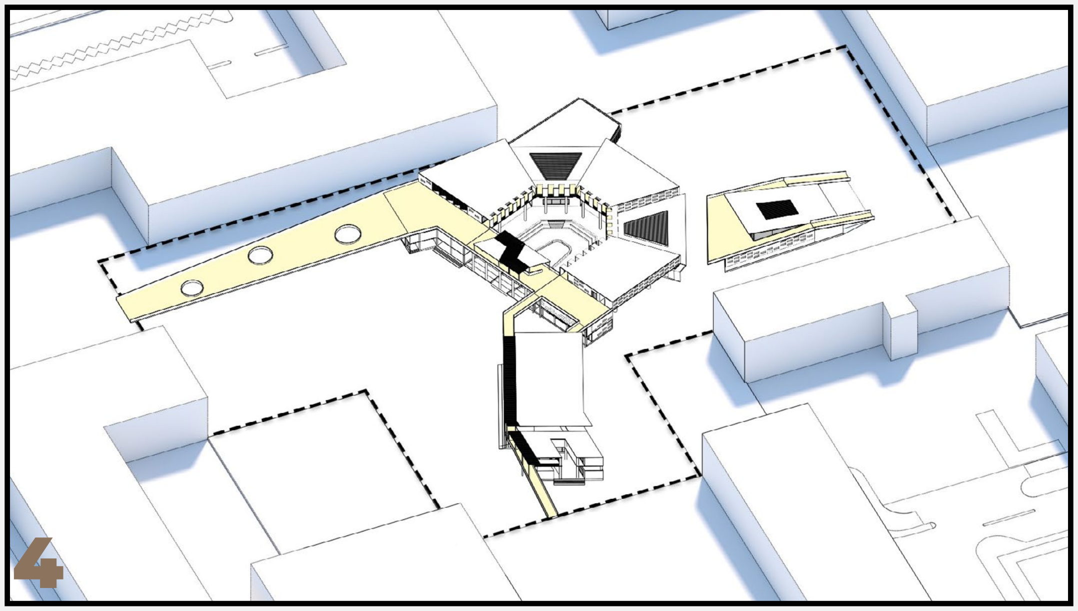
Intial Massing around Focal Point



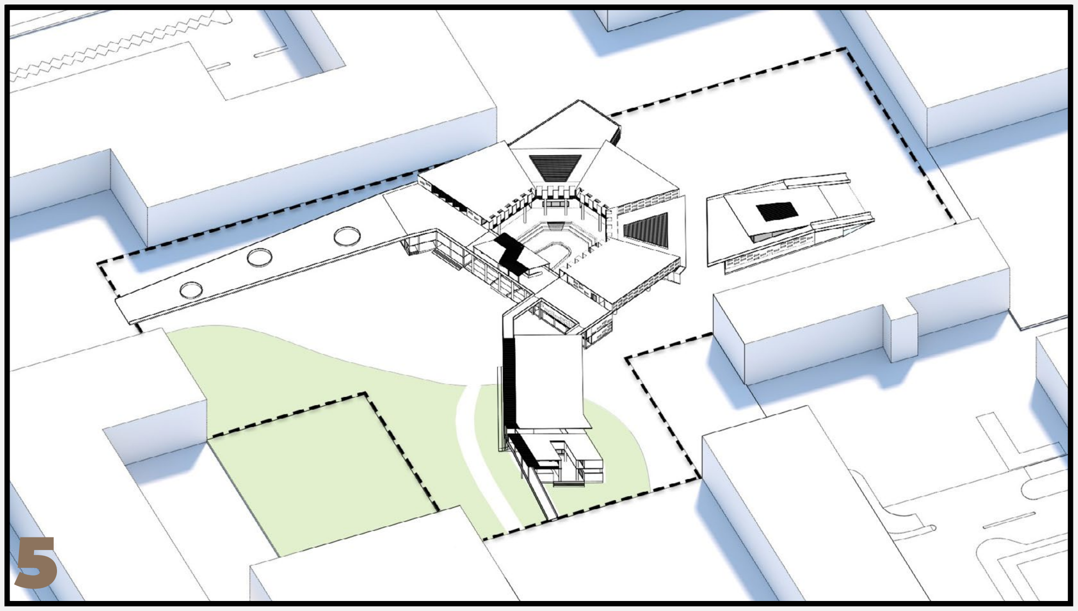
Fragmentaion to allow Circulation on Ground



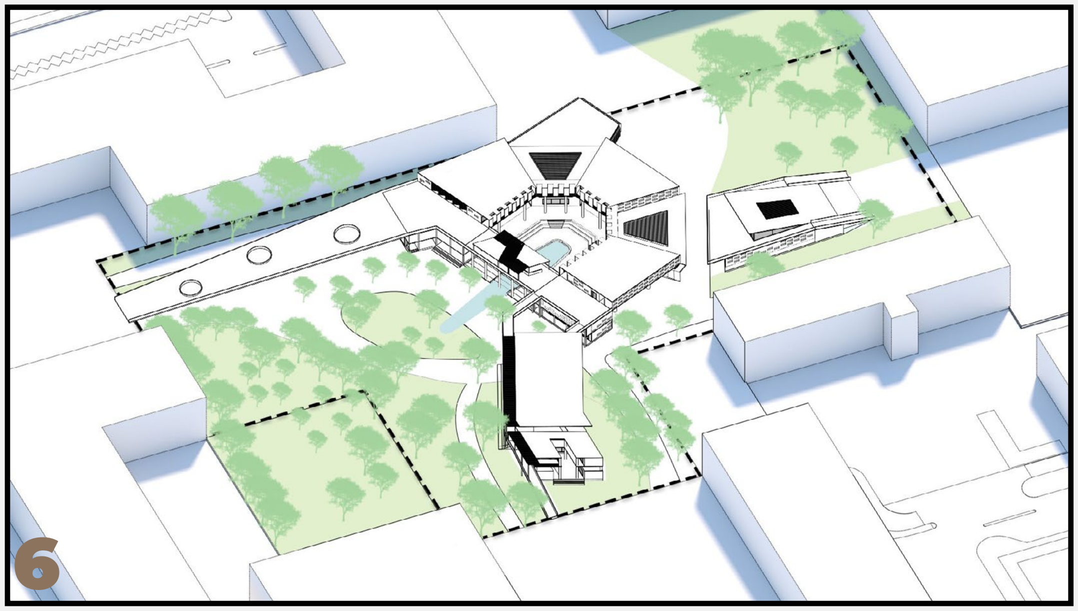
Parts of the block raised up to allow free access to Focal Point



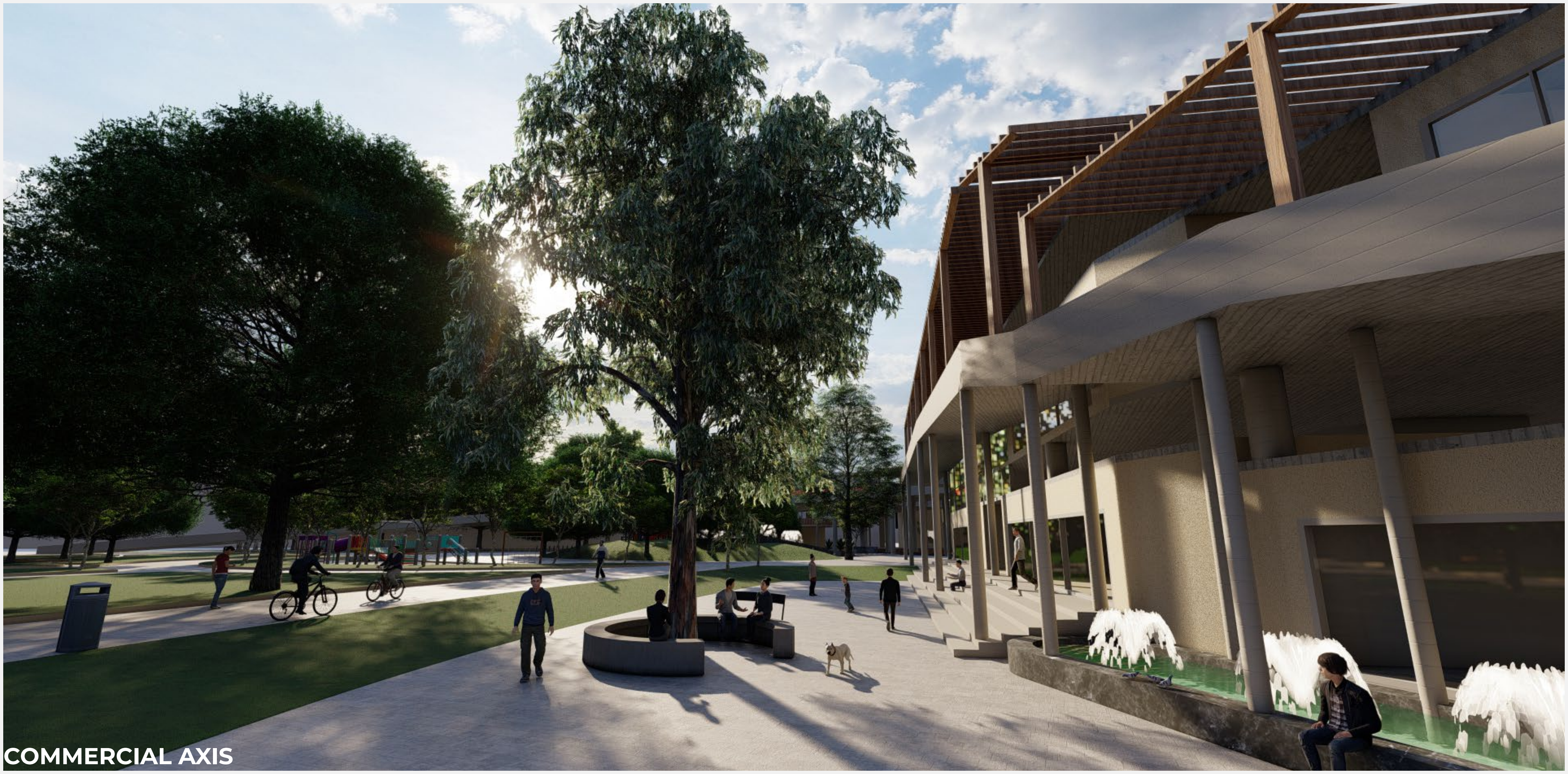
Ramps and Elevated Paths connect all the blocks

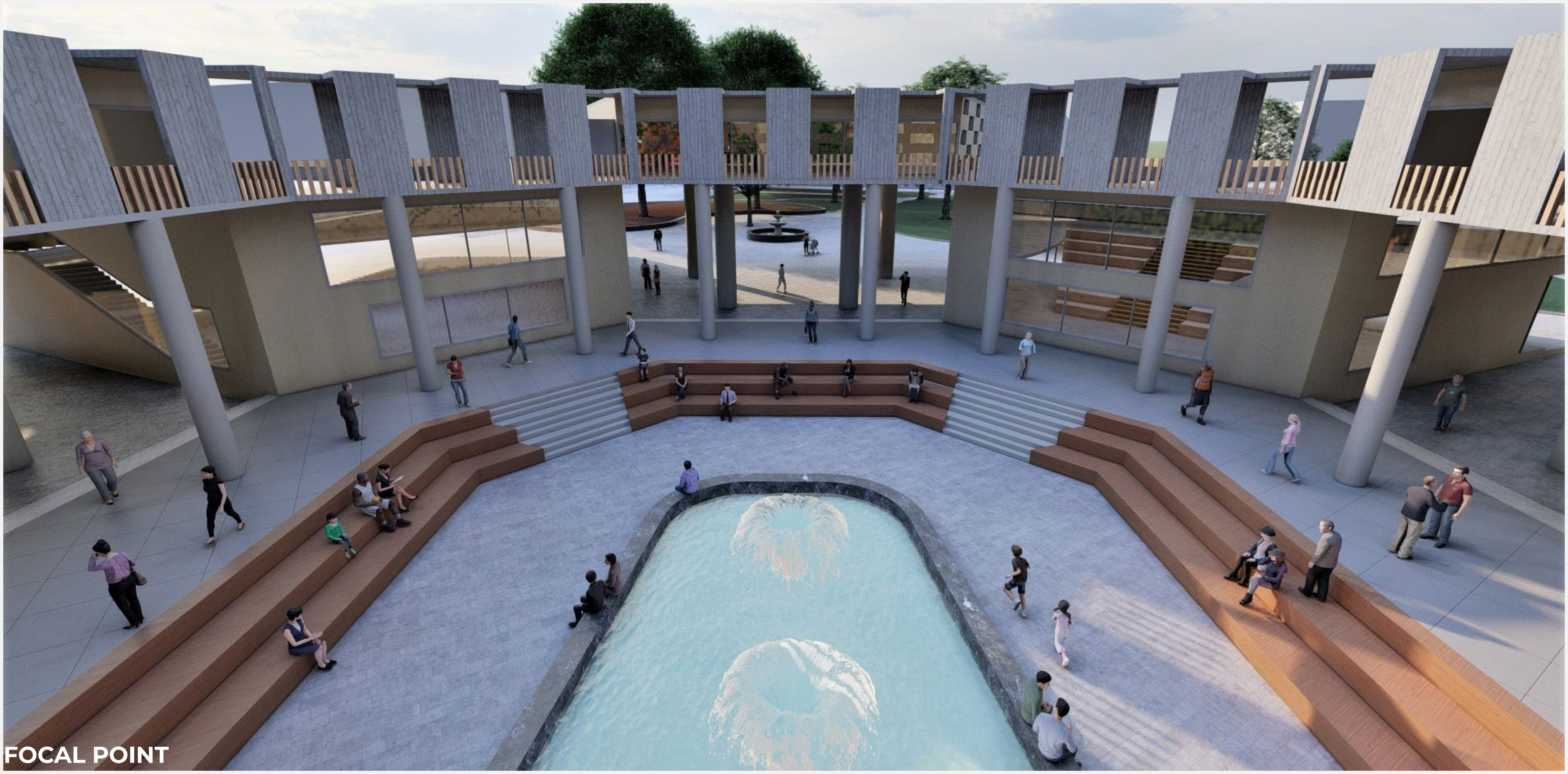


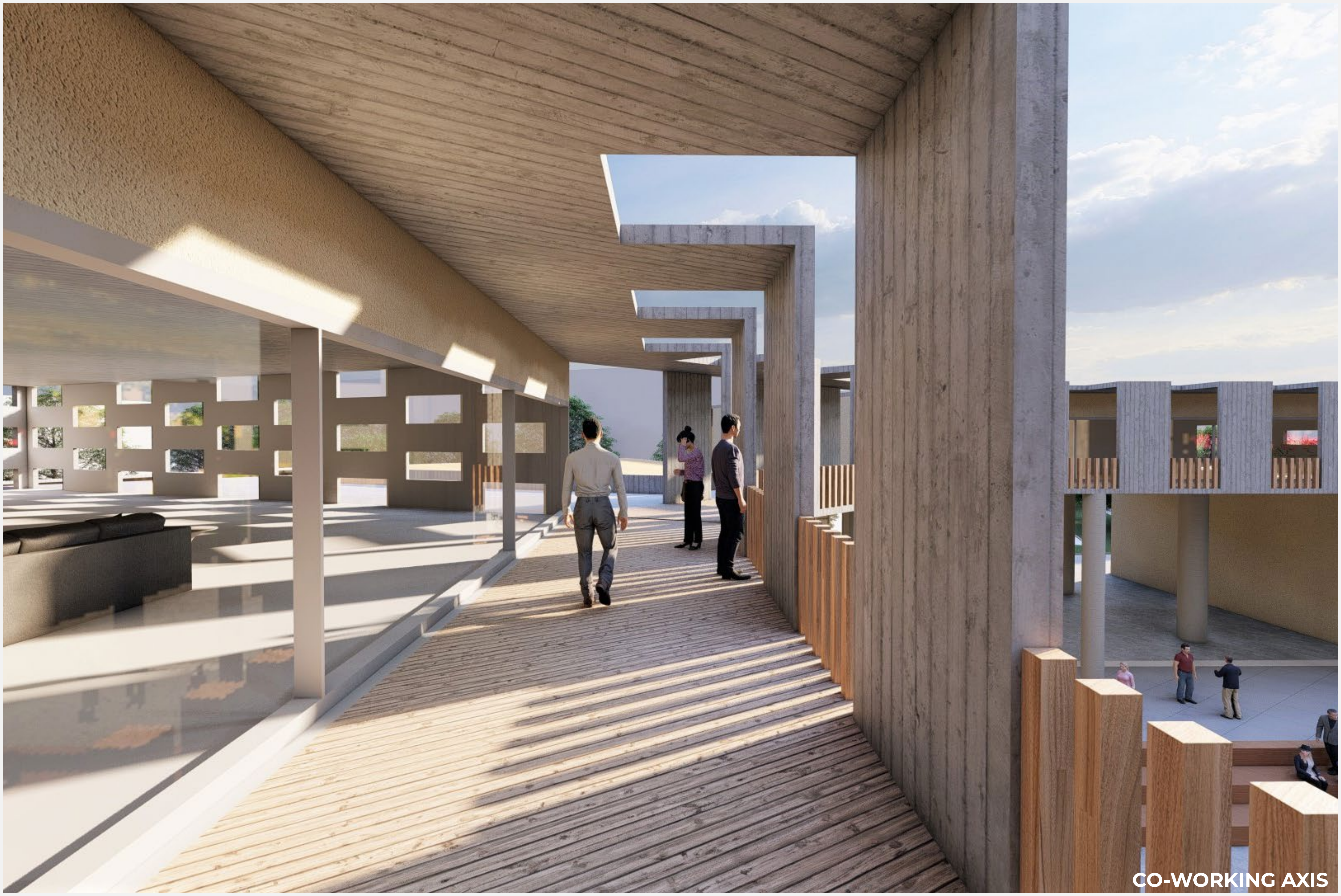
Existing Green Patch and Trees Preserved

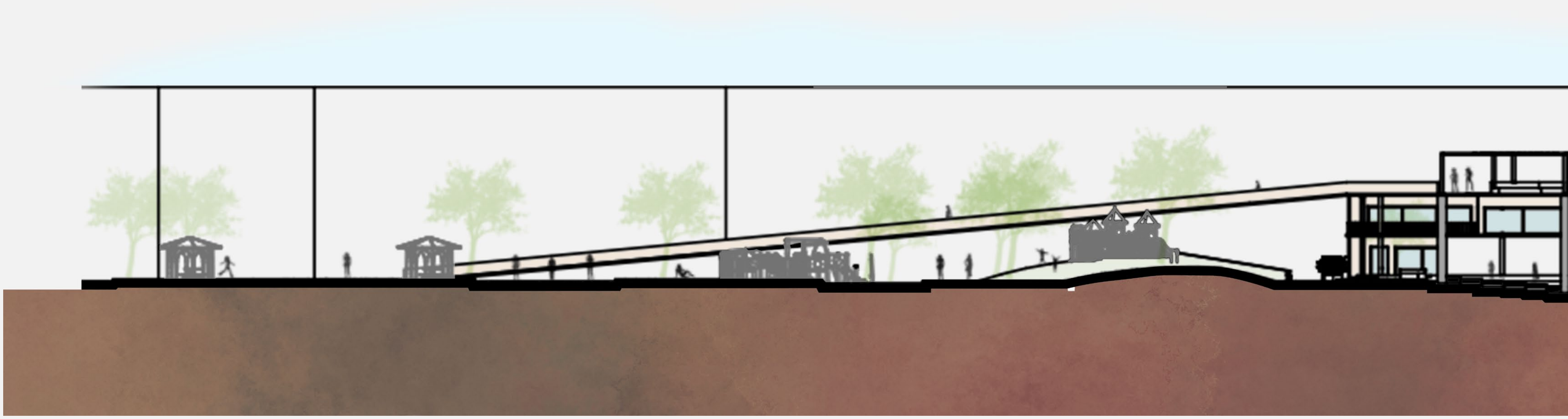


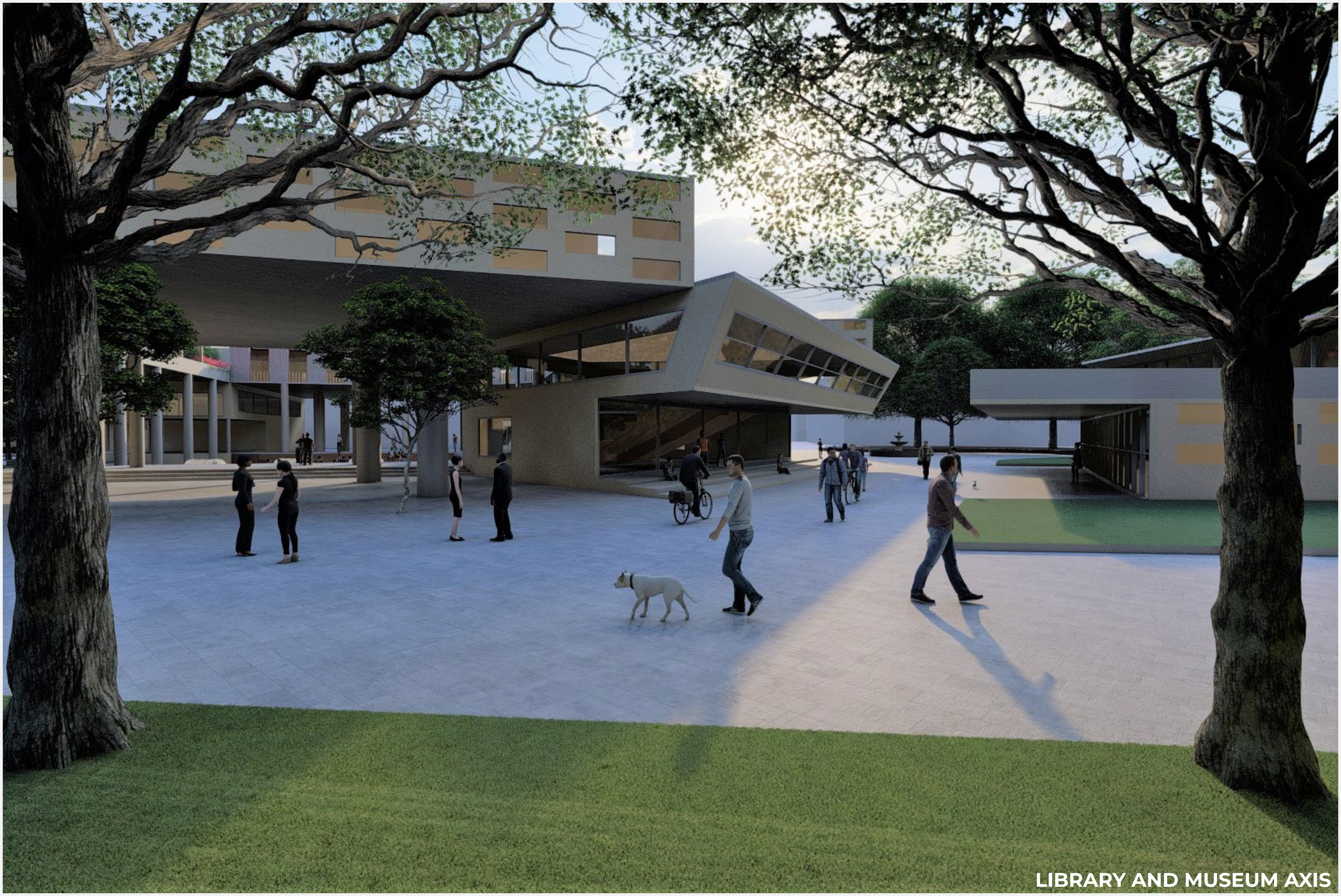
Additional Foliage and Water Bodies added as part of Urban Park


COMMERCIAL AXIS

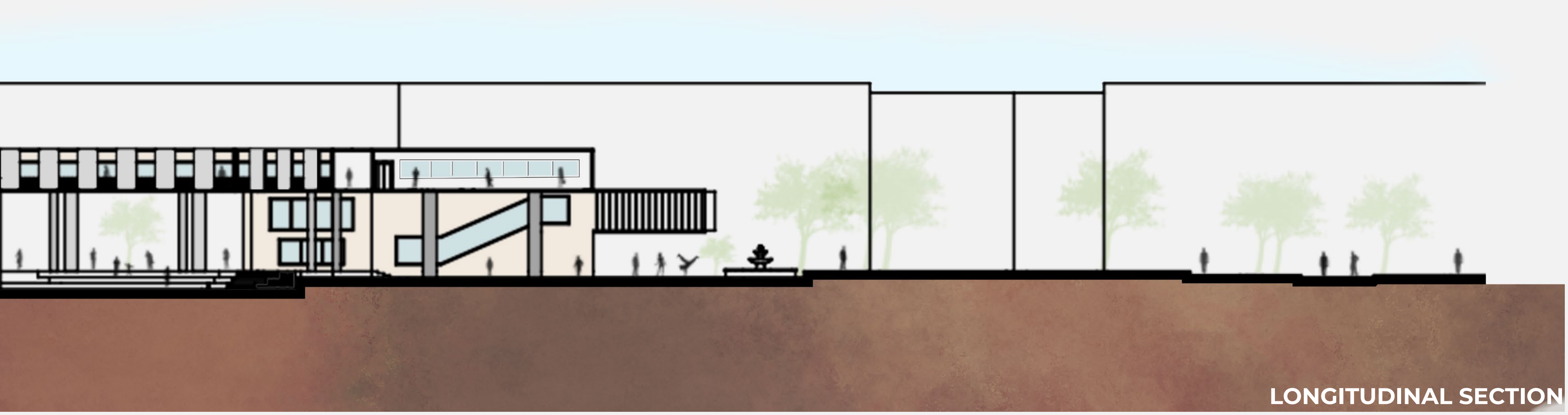

FOCAL POINT


CO-WORKING AXIS

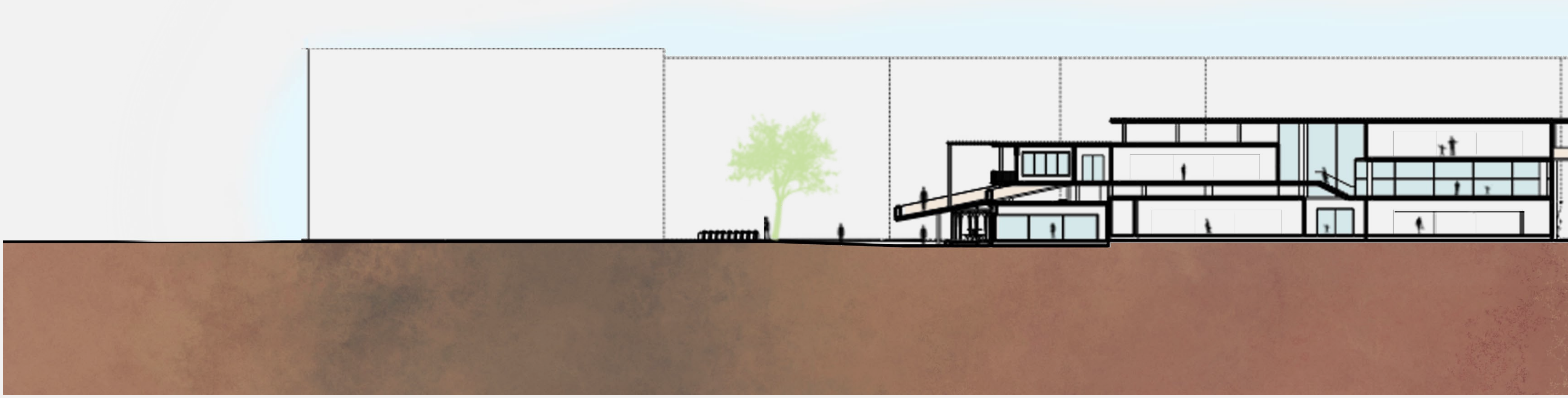




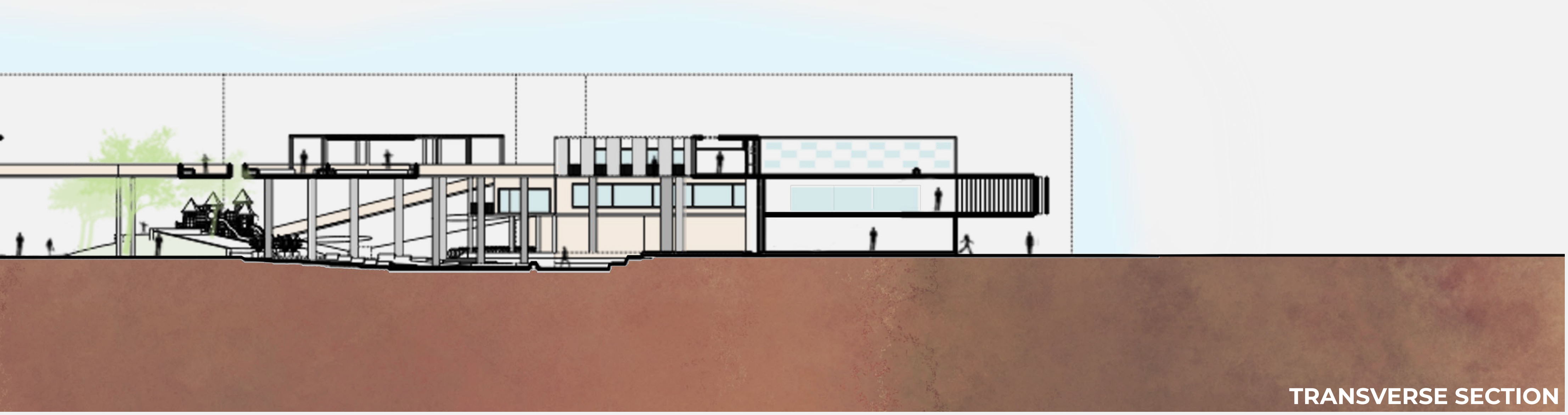
LIBRARY AND MUSEUM AXIS



LONGITUDINAL SECTION

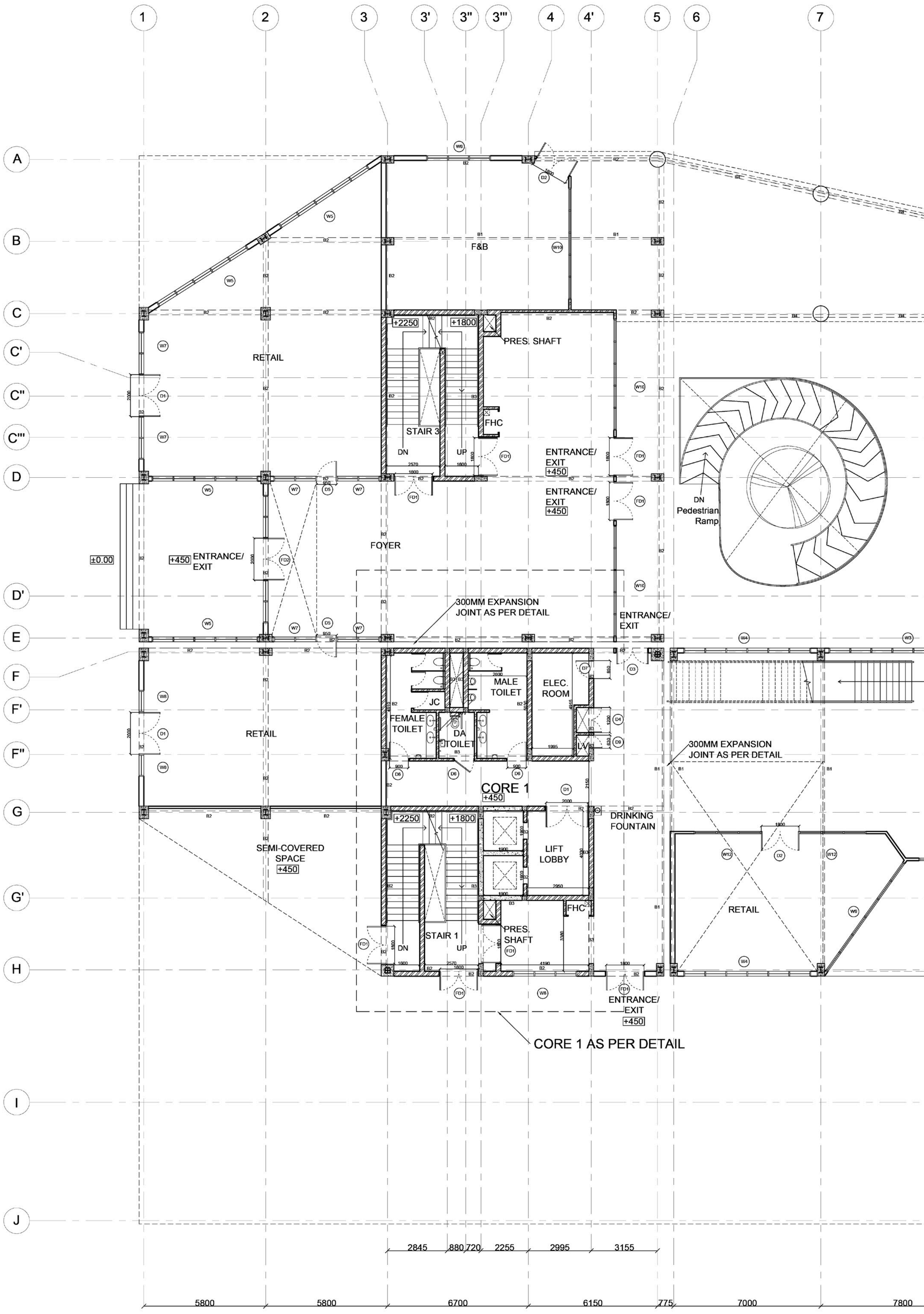


COMMERCIAL AXIS



TRANSVERSE SECTION

# GROUND FLOOR PLAN



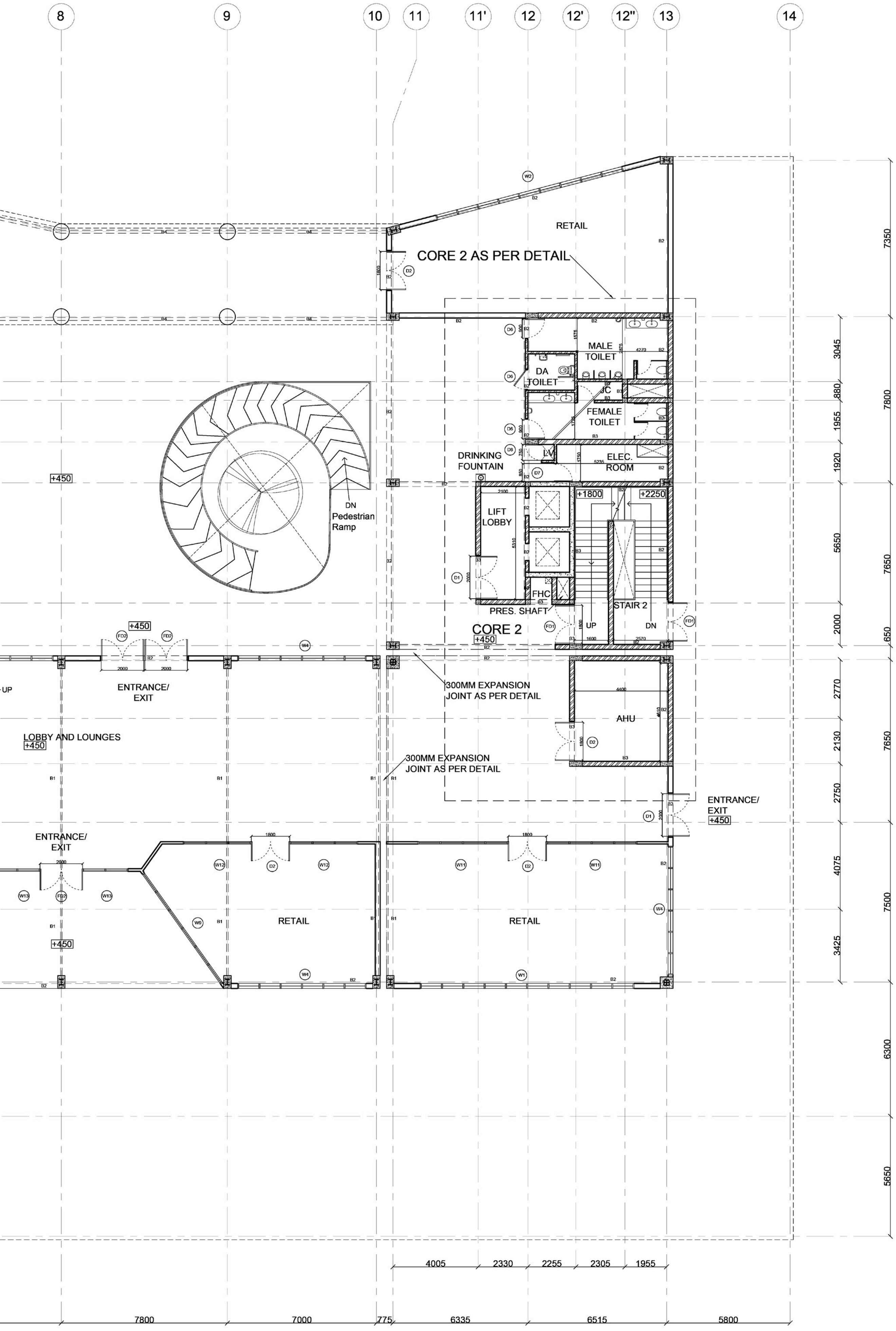
05

(Work in Progress)

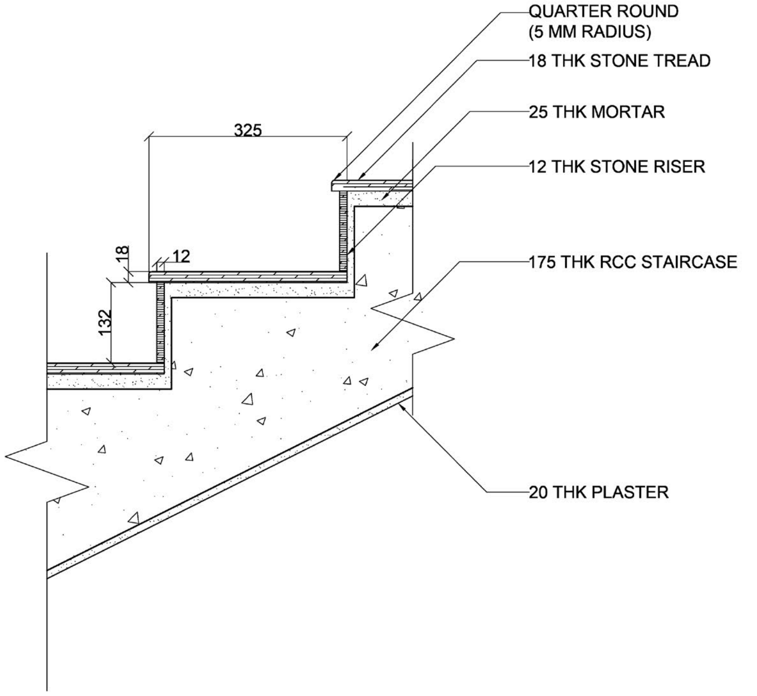
YEAR 4 SEM 7

**TECHNICAL DRAWINGS**

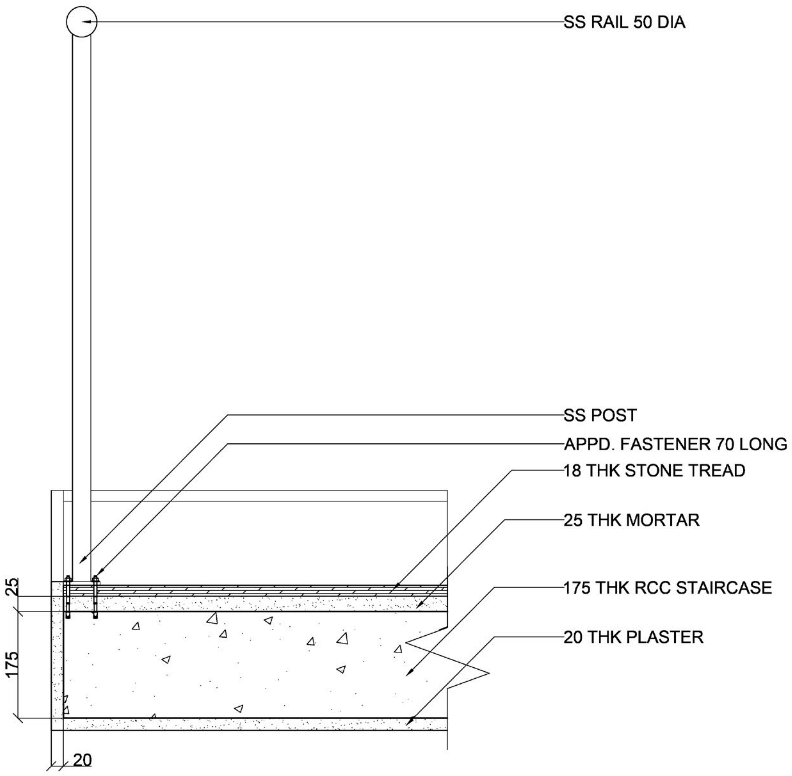
AUTOCAD



# DETAILS

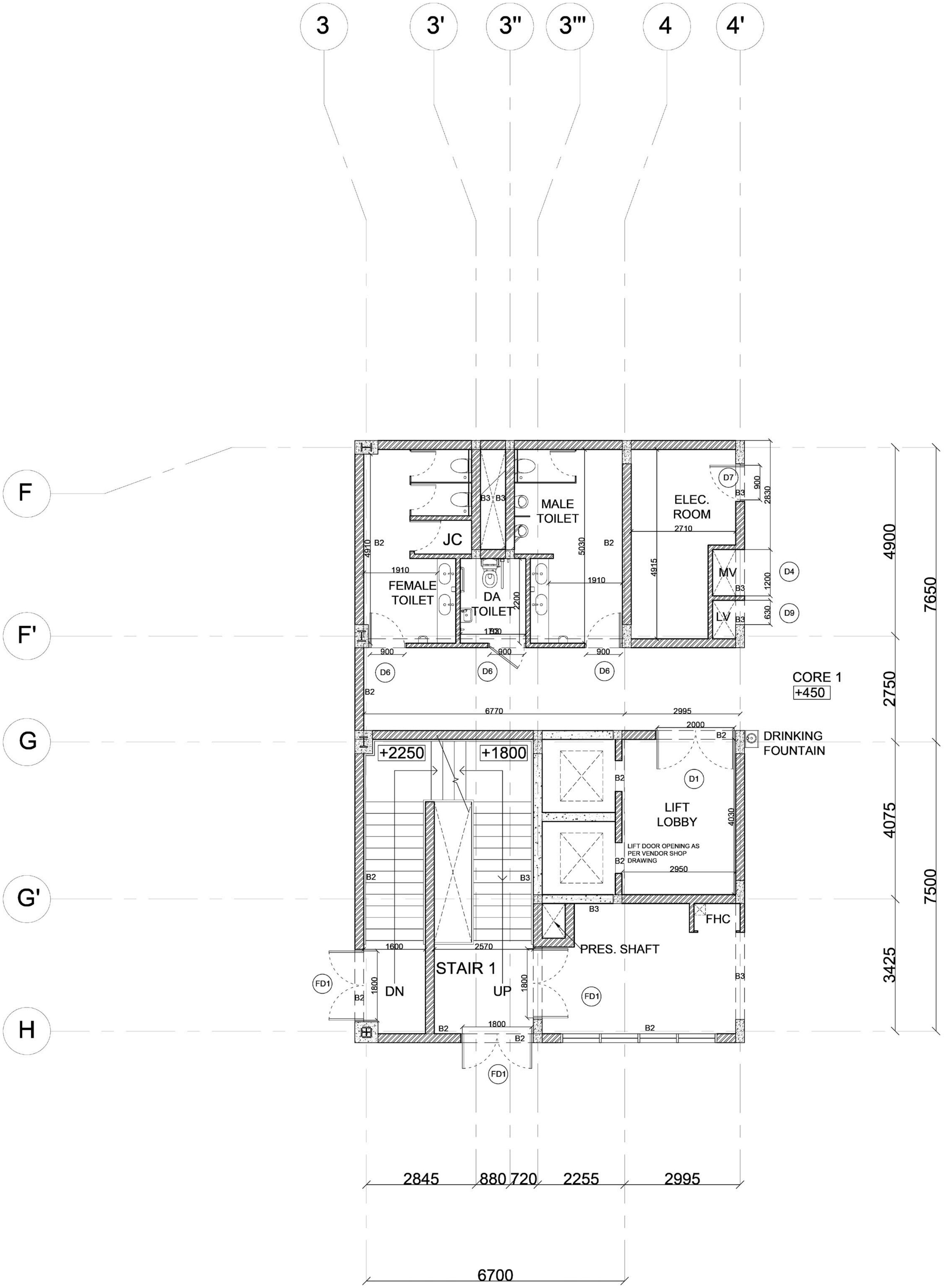


RISER AND TREAD DETAIL

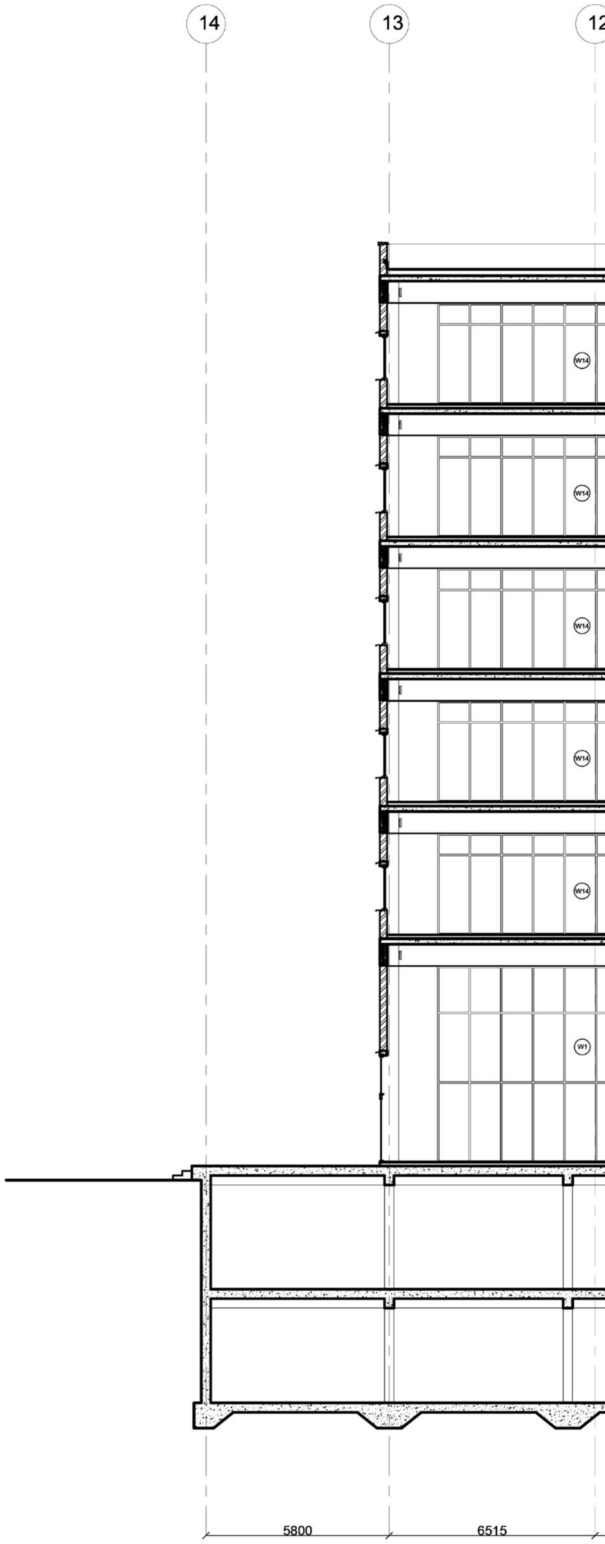


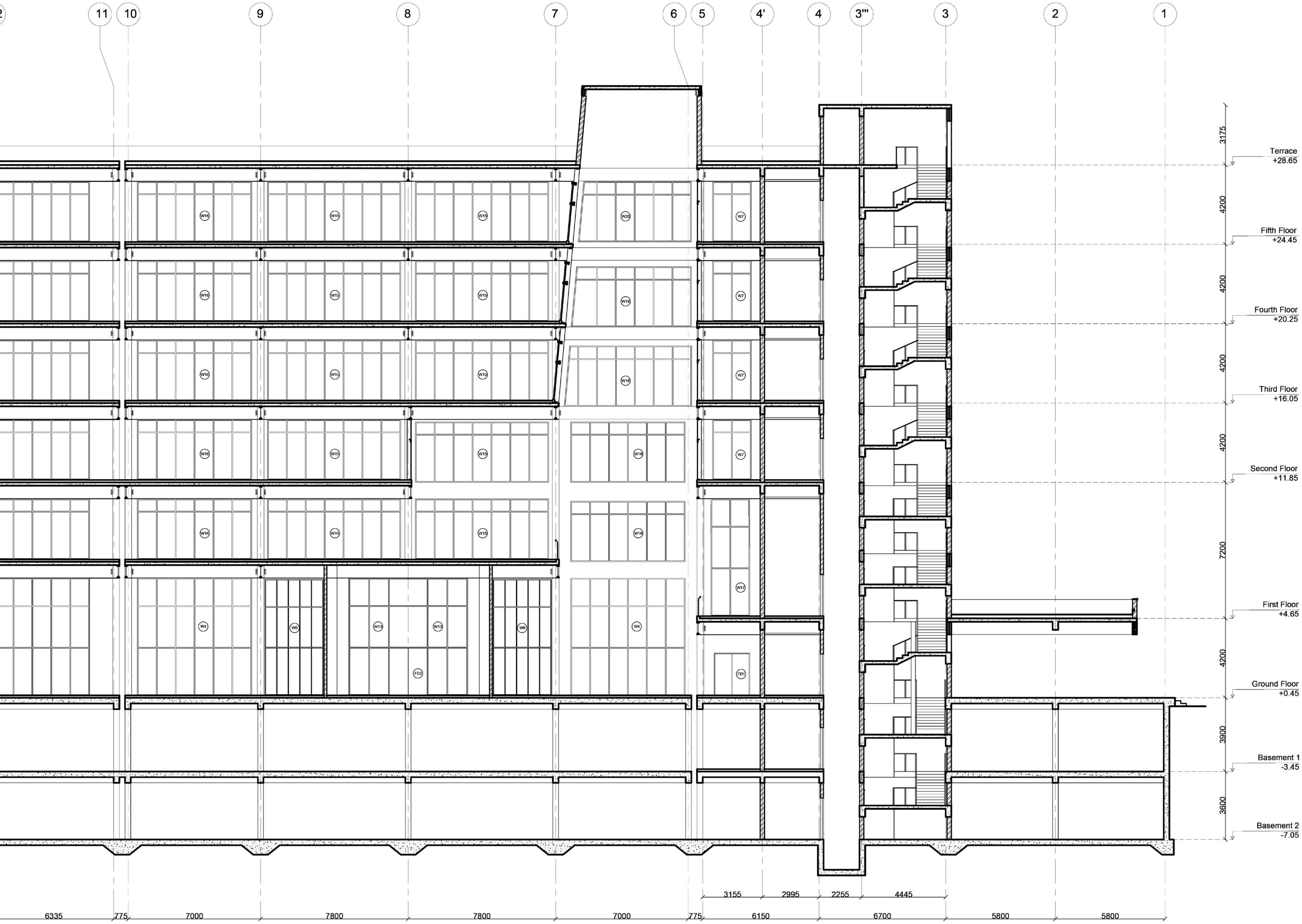
RAILING DETAIL

# GROUND FLOOR CORE



# SECTION




11
10
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8
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5
4'
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3
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1
W16
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W15
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W17
W4
W9
W13
W13
FD2
W9
W4
FD1
3175
Terrace
+28.65
4200
Fifth Floor
+24.45
4200
Fourth Floor
+20.25
4200
Third Floor
+16.05
4200
Second Floor
+11.85
7200
First Floor
+4.65
4200
Ground Floor
+0.45
3900
Basement 1
-3.45
3600
Basement 2
-7.05
3155
2995
2255
4445
6335
775
7000
7800
7800
7000
775
6150
6700
5800
5800

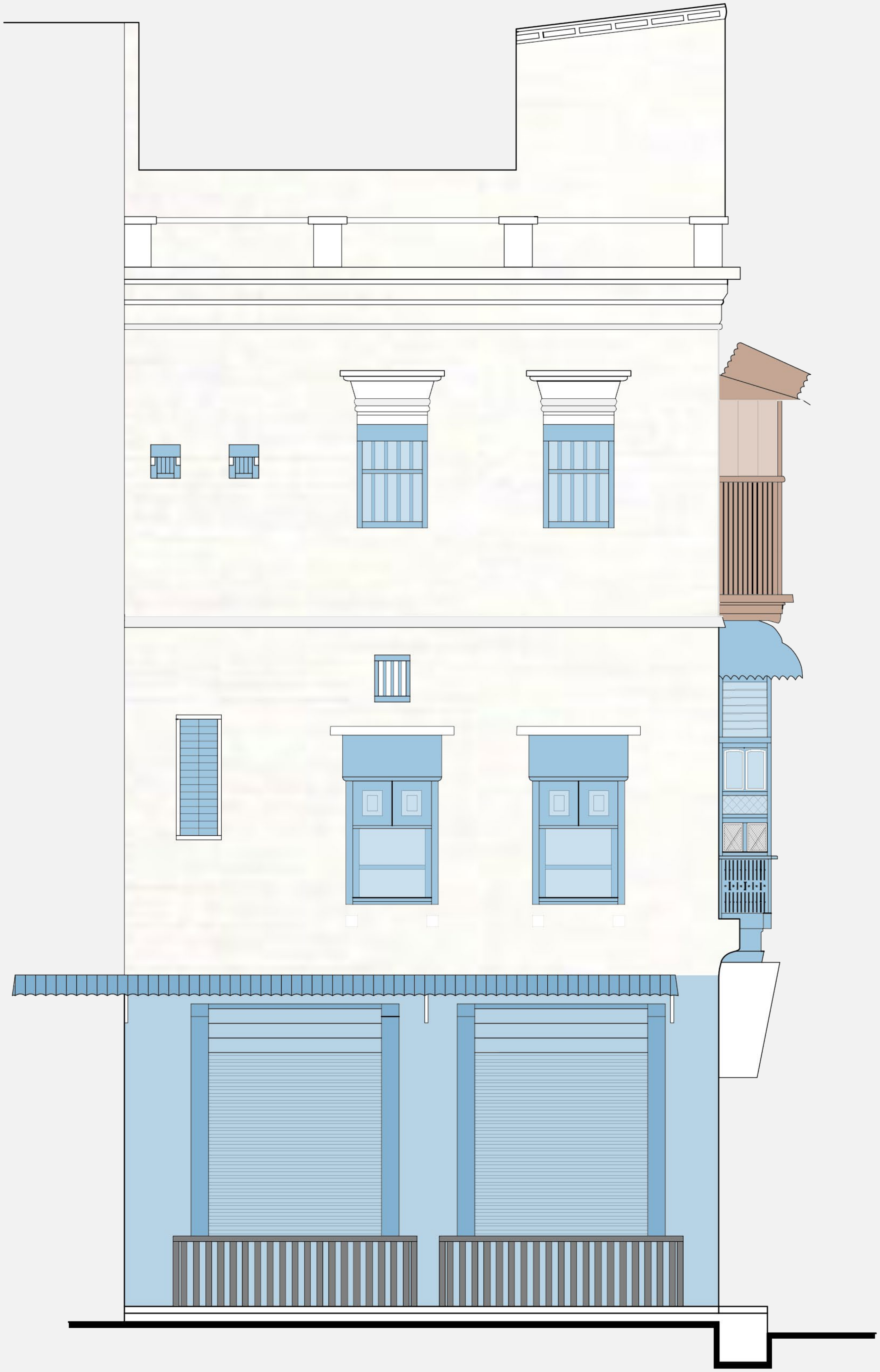
# 06

YEAR 2 SEM3

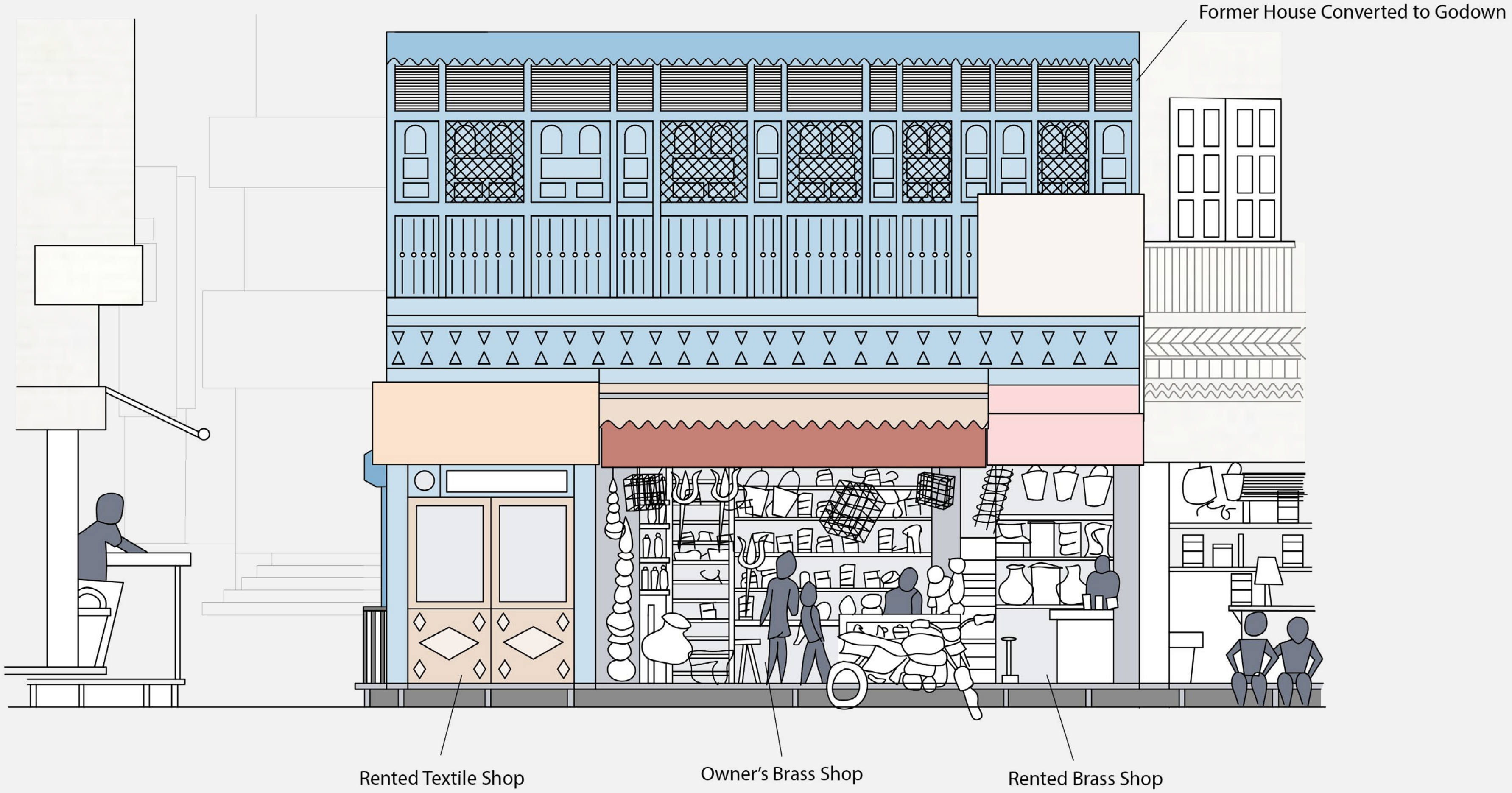
## MORADABAD DOCUMENTATION

*(Team of 5)*

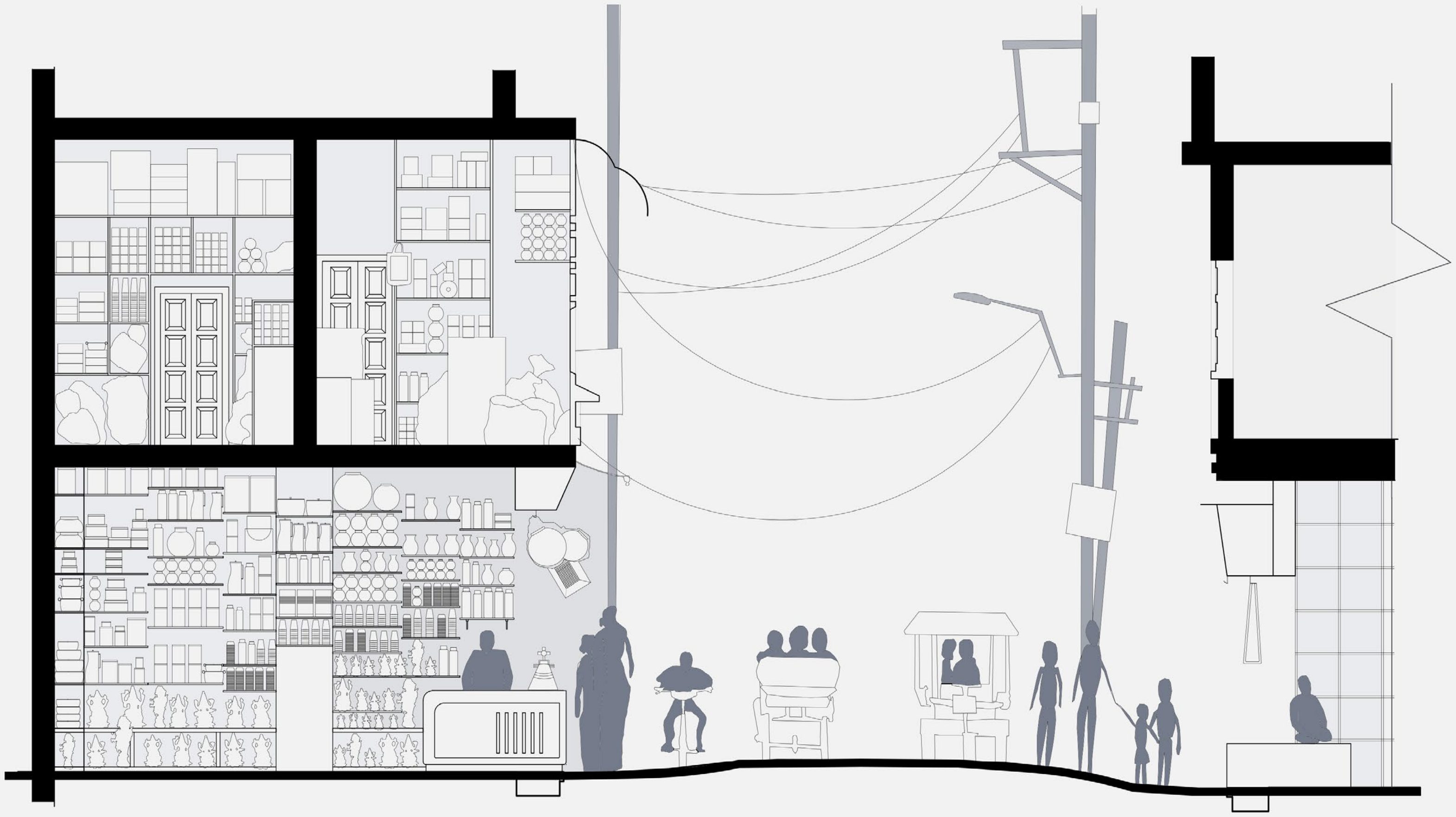
SKETCHING | AUTOCAD | PHOTOSHOP



WEST ELEVATION



SOUTH ELEVATION



STREET SECTION

# PHOTOGRAPHY

*Mystique*
Kasauli, India (2020)

***Sunset Blvd.***
Muscat, Oman (2021)

**Summertime Blues**
Muscat, Oman (2020)

**5:13am**
Muscat, Oman (2020)

DAANISH AKRAM

in daanish-akram

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